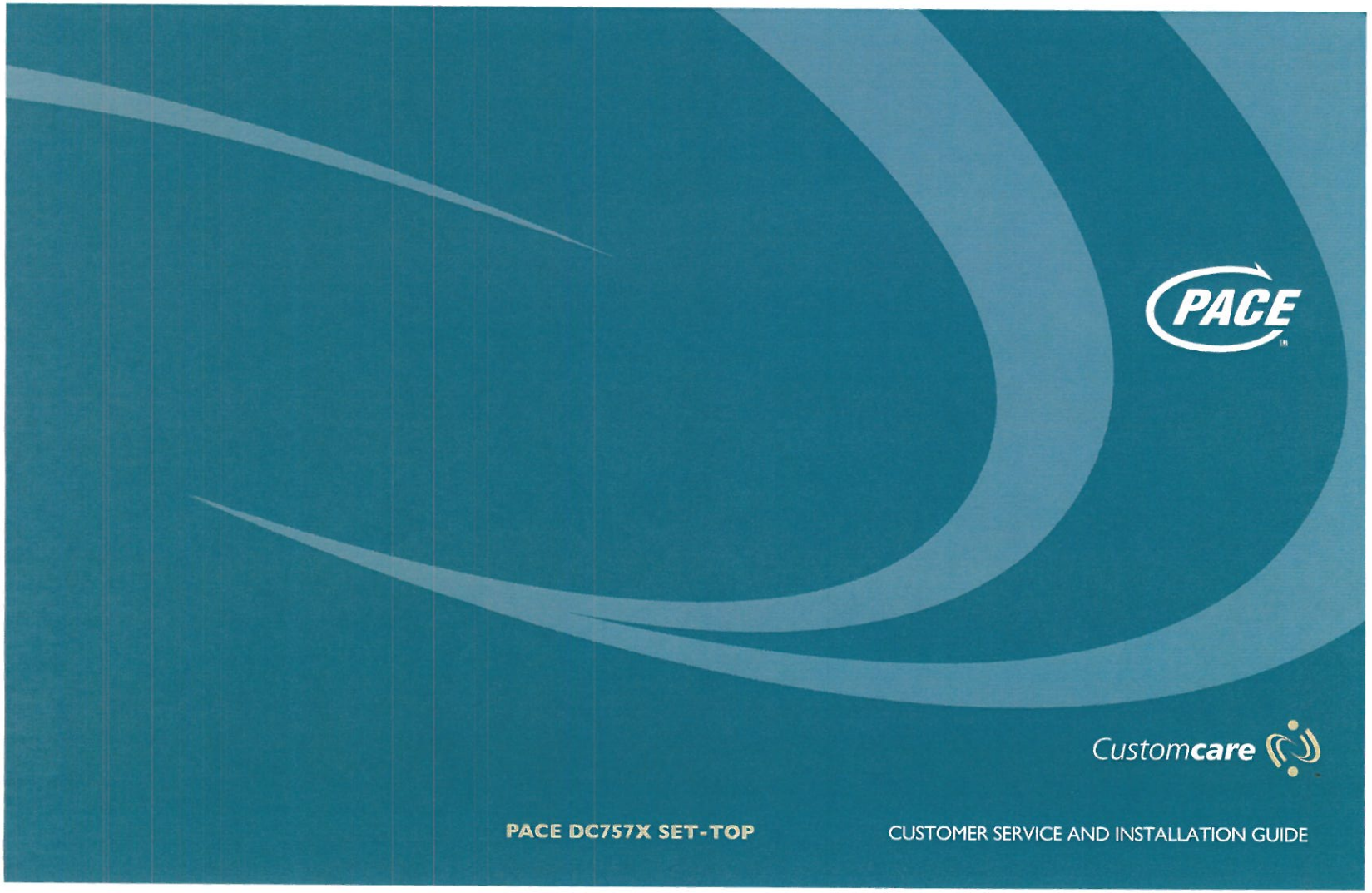
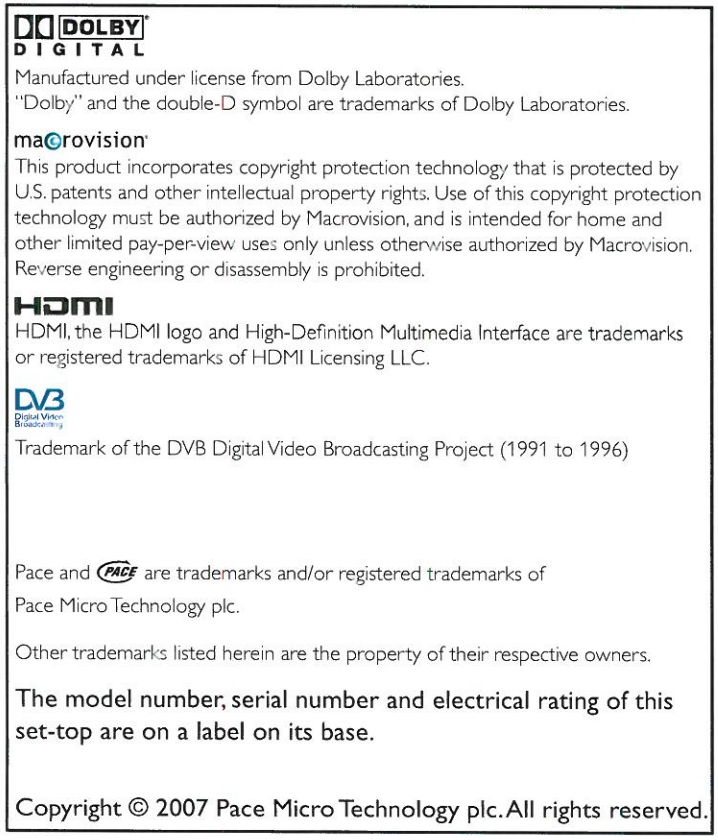

PACE
Customcare
PACE DC757X SET-TOP
CUSTOMER SERVICE AND INSTALLATION GUIDE



DOLBY DIGITAL

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HDMI

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DVB

Trademark of the DVB Digital Video Broadcasting Project (1991 to 1996)

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Other trademarks listed herein are the property of their respective owners.

**The model number, serial number and electrical rating of this set-top are on a label on its base.**

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# CONTENTS


SAFETY INFORMATION ..... 2
OVERVIEW ..... 8
FRONT PANEL ..... 9
REAR PANEL ..... 10
GETTING THE CABLES READY ..... 12
CONNECTING A REMOTE EYE (IR RECEIVER) ..... 13
CONNECTING THE EQUIPMENT ..... 14
- Setup A: HDMI TV (+ optional home theater) ..... 16
- Setup B: DVI TV (+ optional home theater) ..... 18
- Setup C:VCR and HDMI TV ..... 20
- Setup D:VCR, Home Theater and HDMI TV ..... 22
- Setup E: DVD and HDMI TV ..... 24
- Setup F:VCR, DVD, Home Theater and HDMI TV ..... 26
- Setup G: Component-video HDTV (+ optional home theater) ..... 28
- Setup H: DVD and Component-video HDTV (+ optional home theater) ..... 30
- Setup I:VCR, DVD, Home Theater and Component-video HDTV ..... 32
- Connecting the TV to the AC power supply ..... 34

OPERATING THE SET-TOP ..... 36
- Turning the set-top on and off ..... 36
- Tuning the TV and VCR to the set-top ..... 37
- Using the remote control ..... 38
- Lightning storms ..... 38
- Adding digital video recorder (DVR) functionality ..... 39
- Using RF Bypass ..... 41

MAKING USER SETTINGS ..... 42
- About User Settings ..... 42
- About the TV Aspect Ratio ..... 43
- About TV Display Capability (resolution settings) ..... 44
- Auto Pillarbox ..... 47
- Closed Caption settings ..... 49
- Front Panel Settings and Energy Save ..... 51
- Removing the User Settings menu ..... 52
- Restoring the factory default settings ..... 52

USING ZOOM ..... 54
USING THE SETUP MENUS ..... 55
DISPLAYING DIAGNOSTIC SCREENS ..... 56
SOLVING PROBLEMS ..... 57
- Apparent "problems" that may be caused by certain menu settings ..... 61


To enhance the set-top, the on-screen menus may be updated from time to time, over the cable. They may therefore differ from those shown in this manual.

# SAFETY INFORMATION

This digital set-top has been manufactured and tested with your safety in mind. However, improper use can result in potential electric shock or fire hazards. To avoid defeating the safeguards that have been built into the set-top, please observe the precautions discussed in this document.

## WARNINGS ON THE SET-TOP

**CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN

**ATTENTION**
RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR

The lightning flash with arrowhead symbol, within a triangle, is intended to alert you to the presence of uninsulated "dangerous" voltages within the set-top's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within a triangle is intended to alert you to the presence of important instructions in the literature accompanying the set-top.

## OTHER WARNINGS

To reduce the risk of electric shock, do not remove the cover of the set-top. There are no user-serviceable parts inside it.

Do not perform any servicing unless you are qualified to do so. Refer all servicing to qualified service personnel. Servicing the set-top yourself will invalidate the warranty.

To reduce the risk of fire or electric shock, do not expose this set-top to rain or moisture.

On the rear panel of the set-top there is a tamper-evident label that states 'Warranty void if broken or removed'.

## INSTALLATION

The installation of the set-top should be carried out by a qualified installer and should conform to local codes.

### Note to the installer

This reminder is provided to call the attention of the cable-TV-system installer to Section 820-40 of the National Electrical Code (USA), which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as is practical.

Service address:
Pace Micro Technology (Support Services) Ltd.
3701 FAU Boulevard, Suite 200, Boca Raton
Florida, 33431, U.S.A.

**Before you install or use the apparatus, you must read and understand these Important Safety Instructions. At all times when using the apparatus you must follow these Important Safety Instructions to reduce the risk of fire, electrical shock and injury to persons.**

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

## SAFETY INFORMATION (CONT.)

In addition to the Important Safety Instructions, please read the Safety Information below.

### Power sources

You must operate the set-top only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to the home, consult the dealer or local power company. If you move the set-top between locations at different temperatures, allow it to reach room temperature before you apply power to it.

### Water and moisture

Do not expose the set-top to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the set-top. See also item 5 in the Important Safety Instructions.

### Lightning

For added protection for the set-top during a lightning storm, or when it is left unattended and unused for long periods of time, disconnect the cable system from the set-top. See also item 13 in the Important Safety Instructions.

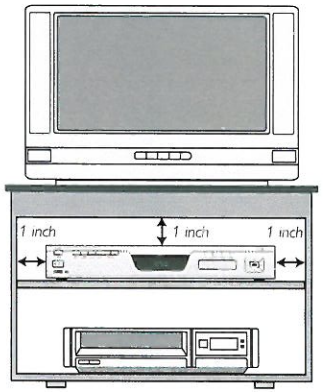
### Placement and mounting

Do not place the set-top on an unstable or uneven surface. The set-top may fall, causing serious injury to a child or adult and serious damage to the set-top. If you mount the set-top, for example to a wall or ceiling, follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer. See also item 12 in the Important Safety Instructions.

### Ventilation

Slots and openings in the casing of the set-top are provided for ventilation, to ensure reliable operation of the set-top and to protect it from overheating.

- Never block the ventilation openings by placing the set-top on a bed, sofa, rug or other similar surface.
- Never cover the ventilation openings with items such as newspapers, table-cloths or curtains.
- Do not place the set-top in a built-in installation such as a bookcase or rack unless proper ventilation is provided or you have adhered to the manufacturer's instructions.
- It is recommended that you maintain a minimum distance of 1 inch around the set-top for sufficient ventilation.




See also item 7 in the Important Safety Instructions.

### Entry of objects and liquids

Never push objects of any kind into the set-top through openings as they may touch dangerous voltage points or short-out parts that could result in fire or electric shock. Never spill liquid of any kind on the set-top.

**Risk of fire or scorching**

Never place naked flame sources, such as lighted candles, on or adjacent to the set-top.

**Ambient temperature**

The operating temperature range of the set-top is 32-104°F. If the ambient temperature around the set-top falls outside this range, you must correct this in order for the set-top to work correctly and safely. For example, if the temperature is too high, switch on the air conditioning.

**Transporting**

Move the combination of set-top and cart with care. Quick stops, excessive force and uneven surfaces may cause the combination of set-top and cart to overturn. See also item 12 in the Important Safety Instructions.

**Overloading**

Do not overload wall outlets, extension cords or other power outlets as this can result in a risk of fire or electric shock.

**Replacement parts**

When replacement parts are required, be sure that the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards. See also item 14 in the Important Safety Instructions.

**Safety check**

Upon completion of any servicing or repairs to the set-top, ask the service technician to perform safety checks to determine that the set-top is in its proper operating condition. See also item 14 in the Important Safety Instructions.

***SAVE THIS INFORMATION FOR FUTURE REFERENCE***

## SAFETY ASPECTS OF CONNECTIONS

Full details of the rear panel are on page 10.

### Connecting

Do not connect the set-top (or any other equipment such as a TV or VCR) to the power supply until you have properly connected all the other cables.

The set-top operates with a 120 V AC, 60 Hz power supply. Do not connect the set-top to any supply other than this.

This set-top is equipped with a two-wire power cord, with a polarized plug at one end. The other end of the cord is fitted with a polarized connector, which is shaped such that it can be fitted only one way into the power input jack of the set-top. Connect this end first, before inserting the polarized plug into the wall socket-outlet.

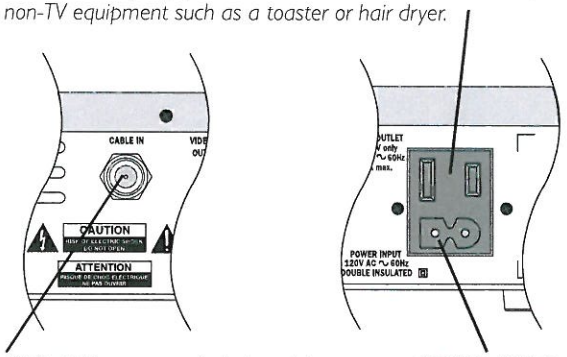
### Disconnecting

Disconnect the set-top from the power supply before you disconnect any other equipment from its rear panel.

The only way to disconnect the set-top from the power supply is to remove the power cord from the wall socket-outlet. The set-top must therefore be installed near to the wall socket-outlet, which should be easily accessible.

*The POWER OUTLET plug is designed only for connection to the AC power cord for a **TV**. The maximum power it can supply is 500 watts.*

*Do not connect any equipment that uses more than 500 watts, or any non-TV equipment such as a toaster or hair dryer.*




*The CABLE IN connector is designed for connection to a cable network only.*

*You must not connect any other equipment, such as a VCR, to this input.*

*POWER INPUT*

## EPILEPSY AND ON-SCREEN IMAGES

Certain people are susceptible to epileptic seizures or losing consciousness when faced with certain types of flashing lights in our daily environment.

These people are exposed to the risk of seizures if they watch certain television images or if they view certain images while they are browsing the Web. These phenomena may appear even when the subject has no previous history of this problem or has never suffered an epileptic seizure.

If you, or a member of your family, has already suffered symptoms linked to epilepsy (seizure or loss of consciousness) in the presence of stimulation by light, please consult your doctor before using this product.

If you or any person using the equipment experiences dizziness, involuntary movements or convulsion, please immediately stop viewing and consult a doctor.

When you are browsing the Web or playing a Web-based game, take the following precautions:

- Use the equipment in a well-lit room, and turn down the brightness of the television screen.
- Sit at a reasonable distance from the television screen.
- Take a break for ten minutes every hour.

You should avoid using the Web if you are tired or have lost some sleep.

## REGULATORY INFORMATION

**CAUTION: Do not attempt to modify the set-top without written authorization from the manufacturer. Unauthorized modification could void your authority to operate the set-top.**

### NOTE

The set-top has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The set-top generates, uses and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If the set-top does cause harmful interference to radio or television reception, which can be determined by turning the set-top off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the set-top and the receiver.
- Connect the set-top to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## OVERVIEW

- Read all the safety information on pages 2 through 7.
- Familiarize yourself with the front and rear panels of the set-top (see pages 9 through 11).
- Is the set-top in a TV cabinet with closed non-transparent doors or somewhere else where its IR-receive window is blocked from view? If so, connect a remote "eye" (IR receiver) (see page 13).
- Decide how you want to connect the set-top (and to which equipment) and look at the table on page 15 to see which setup you should use.
- Be aware of menu settings that could affect your choice of setup (see page 55).
- Connect the equipment together according to your chosen setup, but do not yet connect the power cords (see pages 16 through 33).
- Connect the power cords and turn on the equipment (see pages 34 through 36).
- Check that you can see a picture on the TV and do any necessary tuning (see page 37).
- Add an optional external hard disk for digital video recorder (DVR) functionality (see page 39).
- Check whether the user settings are appropriate for the TV being used and change them if necessary (see pages 42 through 53).
- Any problems? Display the diagnostic screens (see page 56) and consult the "Solving Problems" section on page 57.

## THE SET-TOP'S FRONT-PANEL

You can use the buttons on the front panel to operate the set-top, if, for example, there is a problem with the remote control.

***power button***
*To turn the set-top on/off*

***power light*** *(next to button)*
*Lights green when the set-top is on;*
*red when the set-top is off;*
*not lighted when the set-top is disconnected from the power supply*

***front-panel display***
*Appears when the set-top is turned on*
*Shows the program channel number or the time*
*Also displays HDTV settings (see page 42)*

***message***
*Lights when there is an unread message*

***◀, ▶, ▲ and ▼***
*To move left/right/up/down in an on-screen menu/guide*

***select button***
*To select items in menus/guides*

***guide***
*To display an on-screen guide*

***bypass***
*To turn the RF Bypass feature on/off*

***menu***
*To display on-screen menus*

***info***
*To display on-screen information*

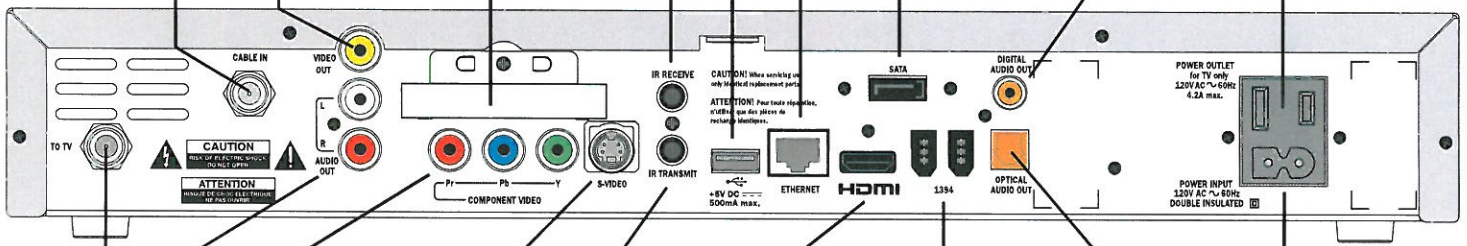
***channel ▲ and ▼***
*To change channel up or down*

***hdtv***
*Lights when the set-top outputs High Definition TV (HDTV) content*

***ir receive***
*Lights when the set-top is receiving a signal from the remote control*

***record***
*Lights red to signify recording is taking place to an external hard disk (if there is one)*

# REAR PANEL




***IR RECEIVE***
*Infra-red input from a remote "eye"*

***Universal Serial Bus (USB)***
*For future use*

***ETHERNET***
*For future use*

***VIDEO OUT***
*Composite video output*

***DIGITAL AUDIO OUT***
***Electrical** S/PDIF audio output*

***CABLE IN***
*From cable service-provider*

***Separable security module***
*(behind cover)*
*Removal will interrupt the service*

***SATA***
*For connection to an optional external hard disk*

***POWER OUTLET***
*(500 W max.)*

***TO TV***
*RF output to the TV or VCR*

***S-VIDEO***
*S-video output*

***HDMI***
*Video and audio output for **digital** HDTV*

***OPTICAL AUDIO OUT***
***Optical** S/PDIF audio output*

***AUDIO OUT***
*Audio outputs (stereo, L and R)*

***COMPONENT VIDEO***
*Component video output for **analog** HDTV*

***IR TRANSMIT***
*Infra-red output to control a VCR (future use)*

***1394***
*For connections to 1394-compatible devices*

***POWER INPUT (Make this connection last of all)***

| | |
|---|---|
| CABLE IN | Connect the cable service here. |
| TO TV | Connect to the RF/antenna input on the TV or VCR (optional). |
| VIDEO OUT | Connect to the video composite input on the VCR (or a standard TV). |
| AUDIO OUT | Connect to the L and R audio inputs on the stereo TV, stereo VCR or optional stereo amplifier. |
| Separable security module (behind cover) | Removal will interrupt the service. |
| COMPONENT VIDEO | If the HDTV does **not** have an HDMI, connect the HDTV here. |
| S-VIDEO | Connect to the S-video input (if present) on the VCR or TV. |
| IR RECEIVE | Connect to an optional remote "eye". |
| IR TRANSMIT | Connect to an optional VCR controller (future use). |
| USB (Universal Serial Bus) | Connect to compatible optional equipment that supports a USB 2.0 interface (future use). |
| HDMI (High Definition Multimedia Interface) | If the HDTV has an HDMI, connect it here for a **digital** audio/video connection (instead of using the AUDIO and 3 **analog** COMPONENT VIDEO connectors). |
| ETHERNET | Connect to an optional PC network (future use). |
| SATA | Connect to an optional external hard disk. |
| 1394 | Connect to 1394-compatible devices. |
| DIGITAL AUDIO OUT | Connect to the **electrical** digital audio input on optional digital audio equipment, such as an audio decoder or home theater receiver. |
| OPTICAL AUDIO OUT | Connect to the **optical** digital audio input on optional digital audio equipment. |
| POWER OUTLET | Connect the TV's power cord here to provide AC power to the TV. |
| POWER INPUT | Connect the set-top's power cord here. |

## GETTING THE CABLES READY

Below is a list of cables (and their connectors) that are shown in the diagrams on pages 16 through 33, along with a key to how they are depicted in the diagrams. (Options are shown as dashed lines.)

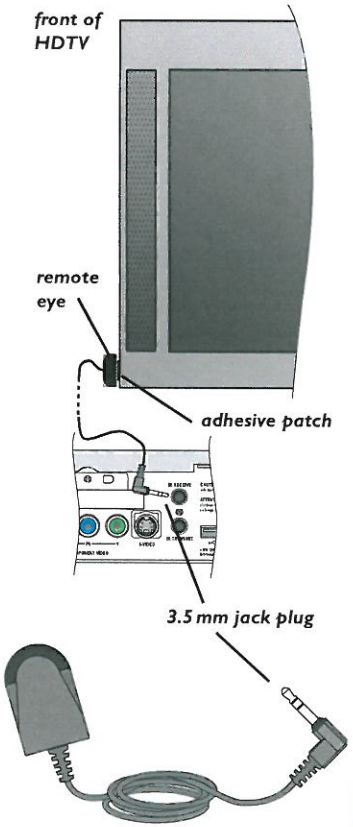
| Cable type | Connector type | Cable numbers | Drawn as |
|---|---|---|---|
| 75 Ω coaxial (RF cable) | male F-type | | |
| HDMI | HDMI 19-pin type A | 1 | |
| HDMI (to DVI) | HDMI 19-pin type A | 2 | |
| Component video 75 Ω coaxial | male RCA jack | 9, 12 | |
| Video 75 Ω coaxial | male RCA jack | 13 | |
| S-video | 4-way male mini-DIN | 4, 5 | |
| Stereo audio coaxial | male RCA jack | 3, 6, 7, 10 | |
| 75 Ω digital audio coaxial* | male RCA jack | 8 | |
| Digital audio optical | optical S/PDIF | 11 | |
| IR receive | male 3.5 mm jack | | |

** Any cable connected to DIGITAL AUDIO IN or DIGITAL AUDIO OUT must be 75 Ω coaxial, not regular audio cable.*

## CONNECTING A REMOTE EYE (IR RECEIVER)

You may need to install the set-top in an equipment closet with closed non-transparent doors or some other location where the remote-control sensor (IR-receive window) on the set-top's front panel is blocked from view (for example, if the TV is wall-mounted). In that case, you need to connect a remote "eye" (IR receiver) to the set-top's rear panel. The IR signals from the remote control can be received by the remote eye and they then reach the set-top through the remote eye's cable. The remote eye is not supplied with the set-top.

1. Select a location for the remote eye. This will typically be on the top or side of the TV, but could be in a different, but convenient, location. Make sure that it is in a position where there is a clear path between the remote control and the remote eye.
2. Make sure that you can conveniently route the cable. The cable on the remote eye is approximately 10 feet long, so make sure that the location you have chosen is within 10 feet of the IR RECEIVE jack on the set-top's rear panel.
3. Make sure the area where you will attach it is clean and dry.
4. A small adhesive patch is supplied with the remote eye. Remove the paper from one side of the patch and stick the patch to the back (larger, flat side) of the remote eye.
5. Remove the paper from the other side of the adhesive patch and stick the remote eye at the position you want. Make sure that the window at the curved end of the remote eye points towards the position from which the remote control will be operated.
6. Insert the 3.5 mm jack plug on the other end of the remote eye's cable into the socket labeled "IR RECEIVE" on the rear panel of the set-top.



# CONNECTING THE EQUIPMENT

The set-top fully complies with international DVB (Digital Video Broadcasting) standards. In order for you to view programs broadcast in high-definition, the set-top must be connected to a suitable HDTV or computer monitor. The set-top is also compatible with standard-definition TVs and VCRs.

On the following pages are diagrams that show you how to connect typical equipment (HDTV, VCR, DVD player and home theater receiver) to the set-top. The connected items are shown individually and then in combination (see the tables on page 15). Some of the connections may change when extra equipment is added. For example, when a you add a home theater receiver, some cables that previously went to the TV can, instead, go to the home theater receiver.

These setups make efficient use of the connectors on the set-top. However, depending on the other equipment and the connectors on it, you may choose to connect things differently.

These setups allow stereo recording and play-back of video tapes. You hear stereo sound from the home theater's loudspeakers.

Although the RF cables (shown by dashed lines in the diagrams) are not absolutely necessary, we recommend that you connect them as a back-up and so that you can use the RF Bypass. If you use the RF cables, you must tune the TV (and VCR) to the set-top's VHF output channel (3 or 4: consult the cable service-provider to find which channel it is for the location). Consult the manuals supplied with the TV and VCR for information on how to tune.

You can take advantage of the digital audio output from the set-top by connecting a suitable cable between the home theater receiver and the OPTICAL AUDIO OUT jack (as shown in the diagrams) or the DIGITAL AUDIO OUT jack.



## WARNINGS

Do not connect the set-top (or any other equipment such as a TV or VCR) to the AC power supply until you have properly connected all the other cables.

Disconnect the set-top from the AC power supply before you disconnect any other equipment from its rear panel.

The only way to disconnect the set-top from the AC power supply is to remove the AC power cord (or switch the wall socket-outlet switch, if present, to its OFF position). The set-top must therefore be installed near to the AC power socket-outlet, which should be easily accessible.

The power outlet is designed only for connection to the AC power cord for a TV. The maximum power it can supply is 500 watts. Do not connect any equipment that uses more than 500 watts, or any non-TV equipment such as a toaster or hair dryer.

The cable input is designed for connection to a cable network only. You must not connect any other equipment, such as a VCR, to this input.

Any cable connected to DIGITAL AUDIO OUT must be 75 ohm coaxial, not regular audio cable.

**Setups using the TV's HDMI connector:**

| | | |
|---|---|---|
| HDMI TV (+ optional home theater receiver) | Setup A | Page 16 |
| DVI HDTV (+ optional home theater receiver) | Setup B | Page 18 |
| VCR and HDMI TV | Setup C | Page 20 |
| VCR, home theater receiver and HDMI TV | Setup D | Page 22 |
| DVD player and HDMI TV | Setup E | Page 24 |
| VCR, DVD player, home theater receiver and HDMI TV | Setup F | Page 26 |

**Setups using the TV's component video and stereo audio connectors:**

| | | |
|---|---|---|
| HDTV (+ optional home theater receiver) | Setup G | Page 28 |
| DVD player and HDTV (+ optional home theater receiver) | Setup H | Page 30 |
| VCR, DVD player, home theater receiver and HDTV | Setup I | Page 32 |

**NOTE**

How you set up the equipment may depend on the home theater receiver. For example, the optical and digital audio inputs may be associated with particular video inputs. Please see the home theater user information for further details.

**NOTE**

**Copy protection via HDMI secure link**

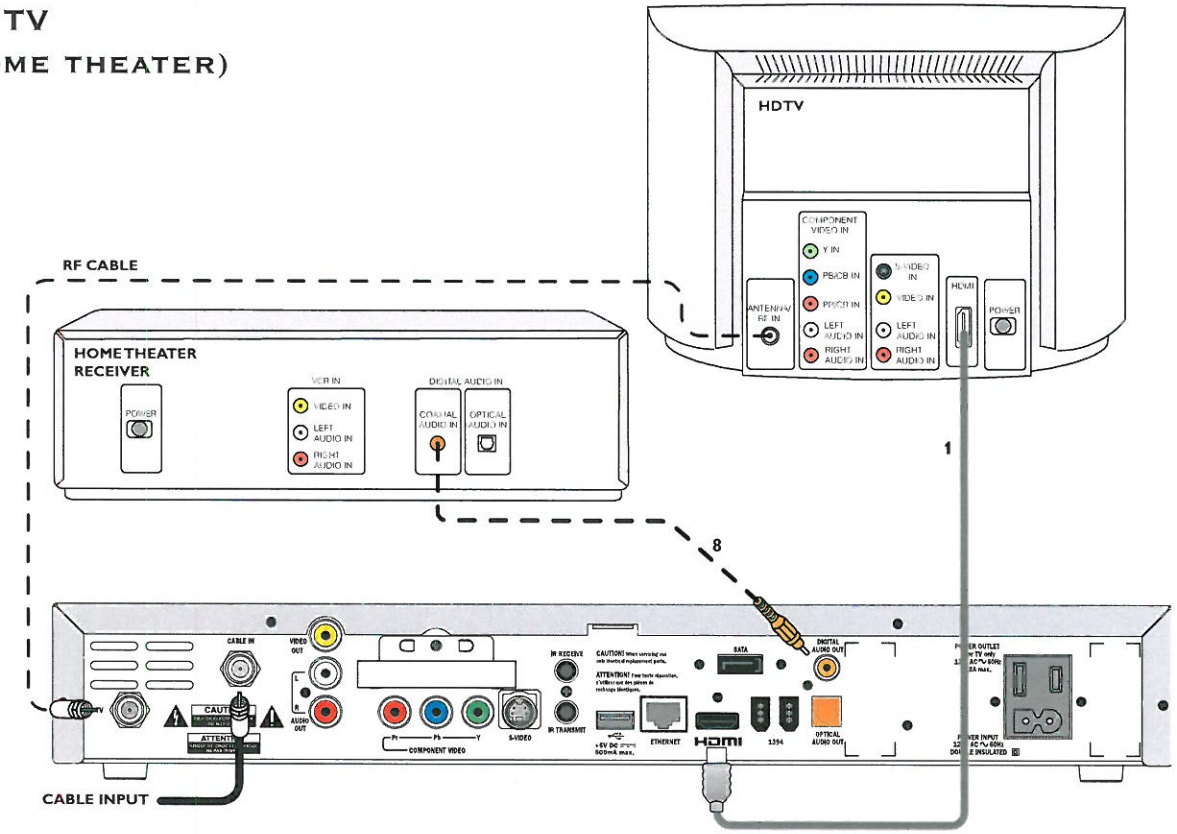
The HDMI link between the set-top and the TV/monitor should be a secure link. When the set-top is attached via a HDMI cable to an HDCP (High-bandwidth Digital Content Protection) -compliant monitor, the monitor and set-top negotiate a secure link, which allows the set-top to transmit full resolution video (picture) to the TV/monitor.

Not all monitors support HDCP. If the set-top is connected to a monitor that does not support HDCP, the following is displayed:

*Your HDTV does not support HDCP. Please use the YPbPr component connection to watch TV.*

The HDMI output is then disabled, so no picture is transmitted from this connector. In that case use the component video connectors to connect up (see Setup G, H and I).

## SETUP A: HDMI TV
## (+ OPTIONAL HOME THEATER)

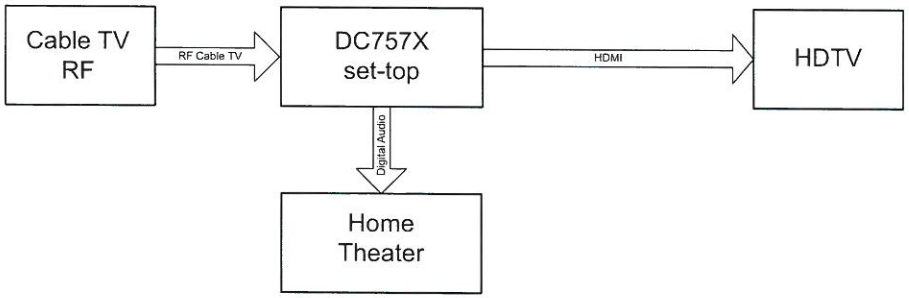


**About Setup A: Using an HDMI cable to connect a TV (optional home theater shown)**

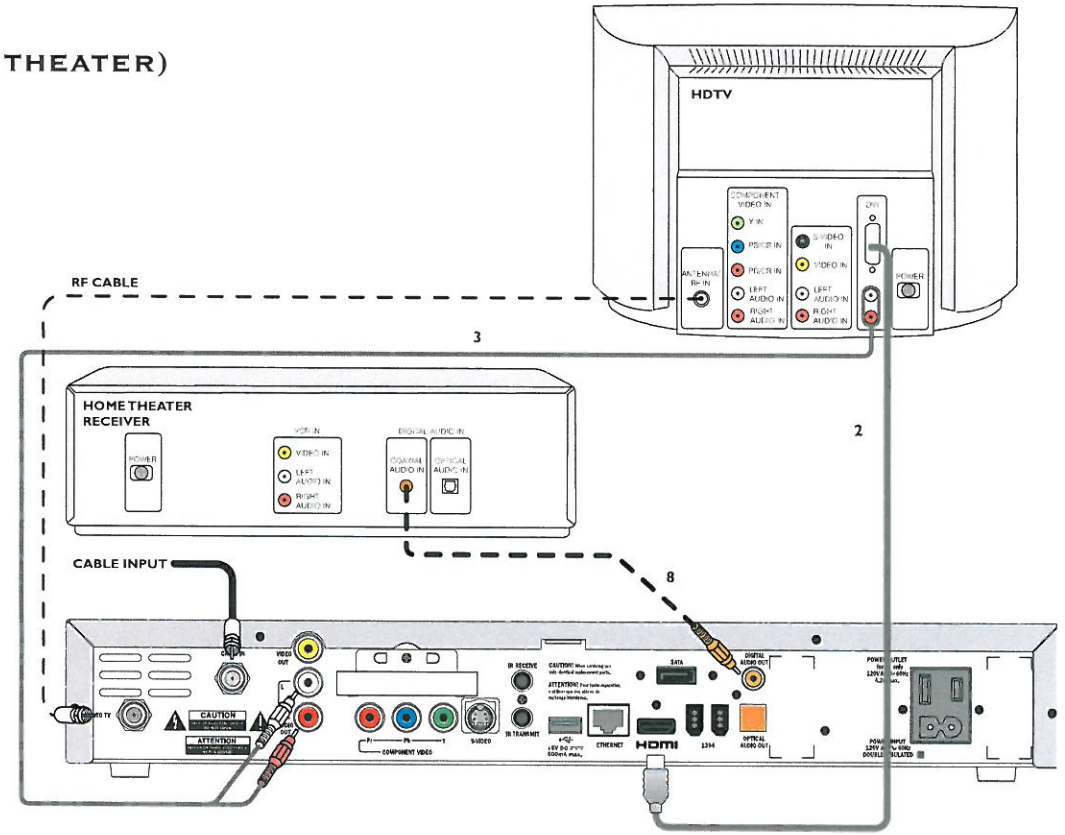
This is the most basic setup, with only an HDTV and optional home theater connected.

- The set-top has a high-definition multimedia interface (HDMI) connector.
- The HDTV has an HDMI, so use an HDMI cable (1) to connect it to the set-top's HDMI.
- HDMI carries both high-resolution digital video and digital audio.
- To enhance the sound, you can connect a home theater receiver.
- There is a choice of two S/PDIF outputs: (i) electrical (labeled DIGITAL AUDIO OUT, which is shown connected by cable 8 in the diagram, opposite) and (ii) optical (labeled OPTICAL AUDIO OUT).
- When you add a home theater receiver, the set-top's audio connection to the TV (via HDMI) is not needed, so you may wish to mute (turn off) the audio on the TV.

**Cable Wiring Diagram A**



## SETUP B: DVI TV
## (+ OPTIONAL HOME THEATER)

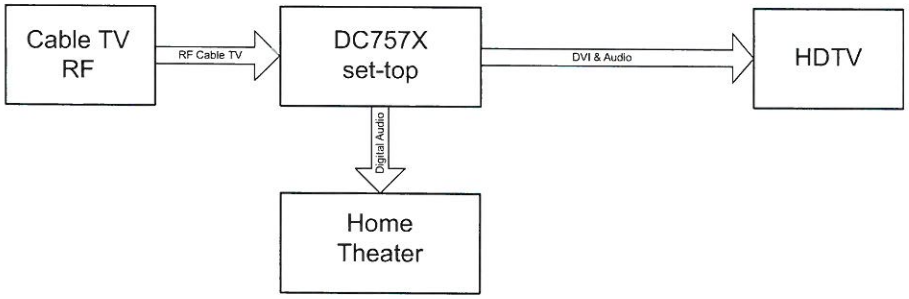


**About Setup B: Using an HDMI-to-DVI cable to connect a TV (optional home theater shown)**

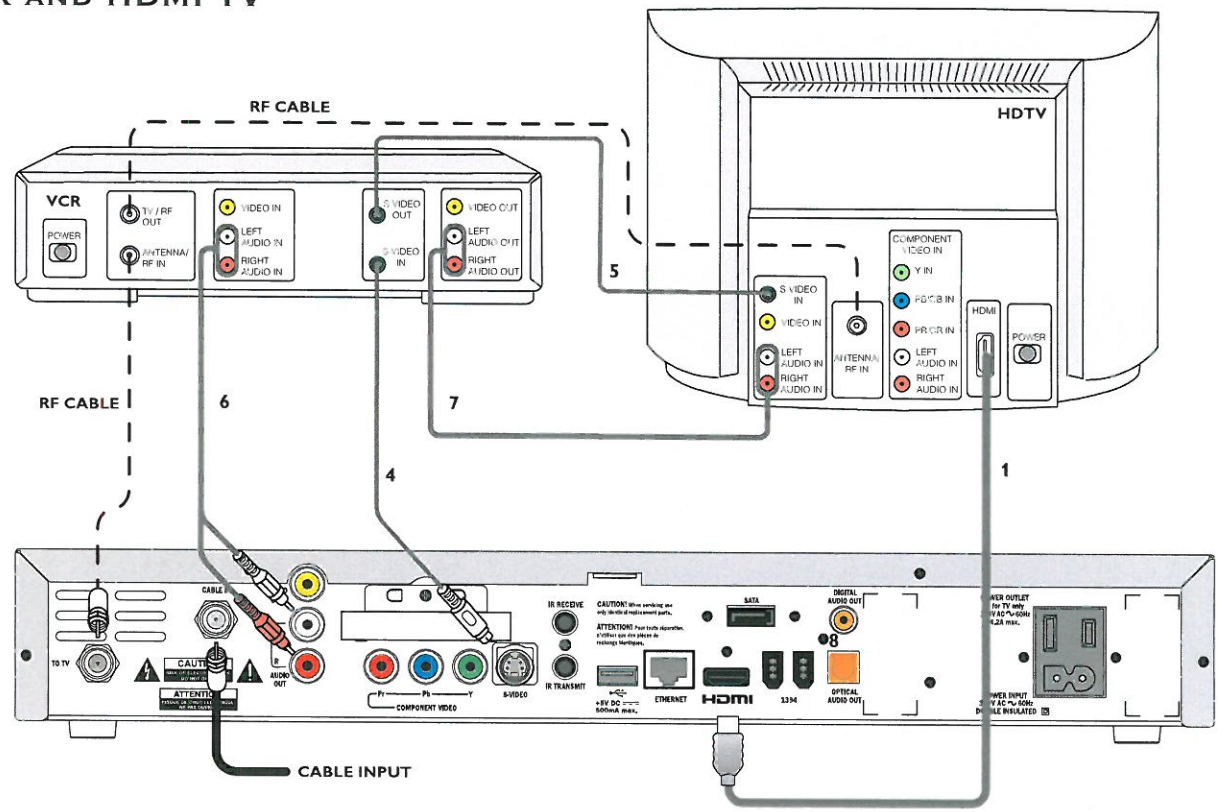
If the TV has a DVI connector, you can still take advantage of the digital video signal.

- The set-top has a high-definition multimedia interface (HDMI) connector.
- The HDTV has a DVI, so use a special HDMI-to-DVI cable (2) to connect it to the set-top's HDMI. Both DVI and HDMI carry high-resolution digital video.
- Use baseband audio cables: cable 3 from the set-top's AUDIO OUT jacks to the HDTV's baseband audio inputs, as shown.
- To enhance the sound, you can connect a home theater receiver, using the set-top's DIGITAL AUDIO OUT connector (as shown) or its OPTICAL AUDIO OUT connector. In that case, cable 3 is not needed.

**Cable Wiring Diagram B**



## SETUP C: VCR AND HDMI TV

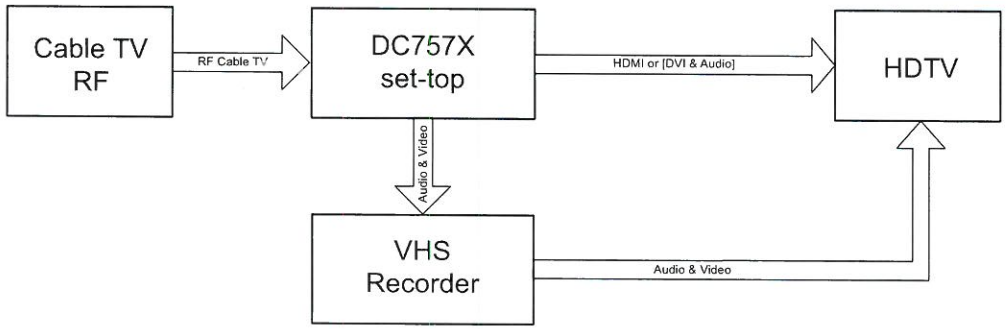


**About Setup C: Using an HDMI cable to connect a TV and S-video cable to connect a VCR**

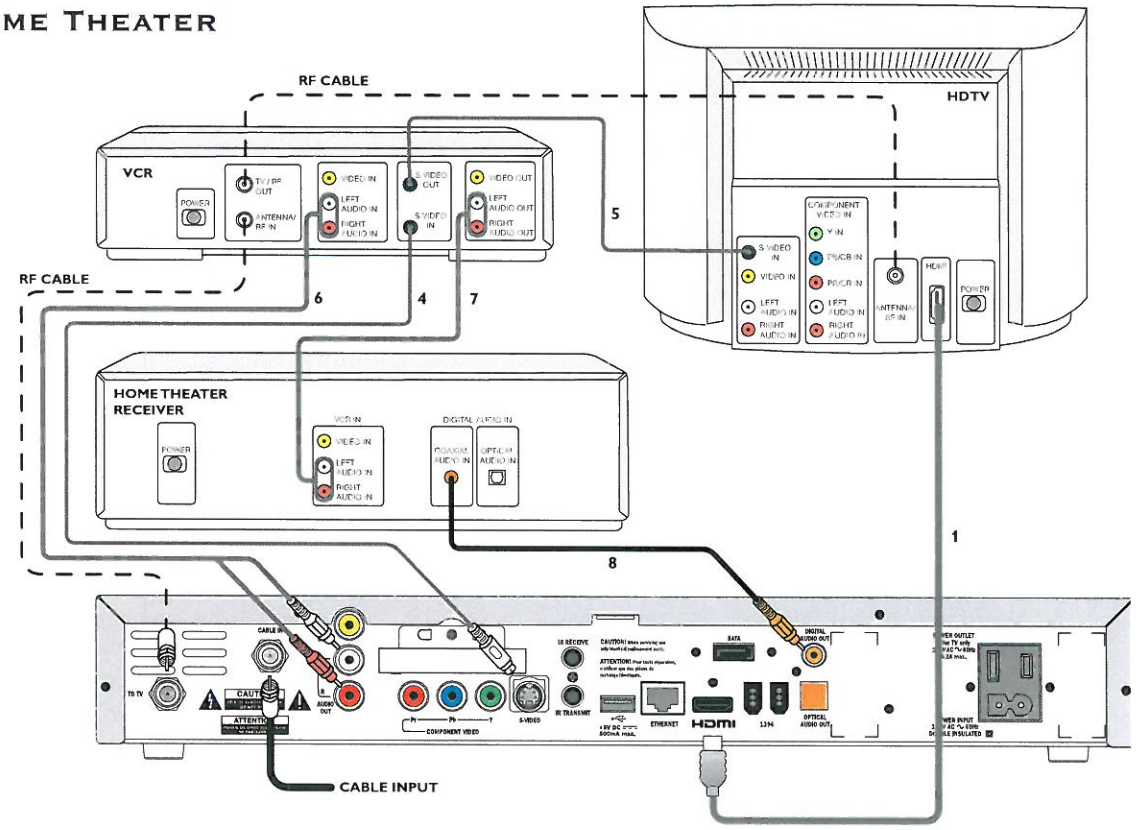
In this setup, a VCR is added to the basic setup. The way in which you connect the HDTV to the set-top (either HDMI or component video) does not affect the way you connect the VCR. Therefore an HDMI connection between the set-top and the TV is shown on page 20. (It could be component video instead).

- If the VCR and HDMI TV have S-video connectors, use S-video cables (4 and 5), as this gives a better quality picture. If there are no S-video connectors, use the baseband video jacks and video 75 ohm coaxial cables.
- Use baseband audio jack cables: cable 6 (from the set-top's AUDIO OUT jacks) and cable 7 (between the VCR and the HDMI TV).
- The path for recording on the VCR is cables 6 (baseband stereo audio) and cable 4 (S-video) (or via baseband video jacks).
- The path for playing back from the VCR is cable 7 (baseband stereo audio) and cable 5 (S-video) (or via baseband video jacks).

**Cable Wiring Diagram C**



## SETUP D: VCR, HOME THEATER AND HDMI TV

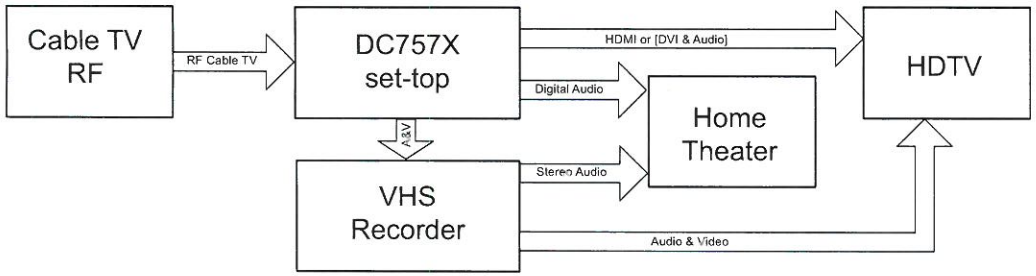


**About Setup D: Adding a home theater receiver to Setup C**

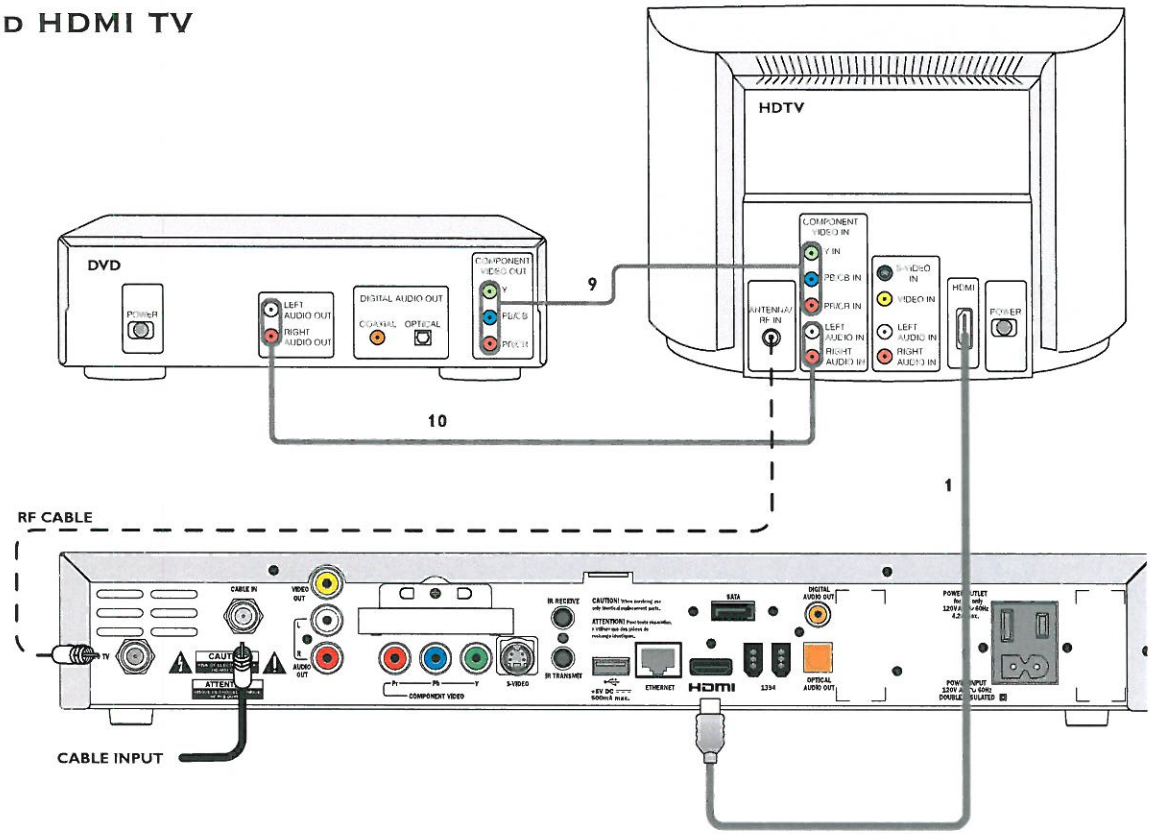
All of the points mentioned in Setup C apply.

- To enhance the sound, connect a home theater receiver.
- There is a choice of two S/PDIF outputs: (i) electrical (labeled DIGITAL AUDIO OUT, which is shown connected by cable 8 in the diagram, opposite) and (ii) optical (labeled OPTICAL AUDIO OUT).
- When you add a home theater receiver, the set-top's audio connection to the TV (via HDMI) is not needed, so you may wish to mute (turn off) the audio on the TV.
- Instead of the VCR's baseband audio output going to the TV, it connects via cables 7 to the home theater receiver.

**Cable Wiring Diagram D**



## SETUP E: DVD AND HDMI TV

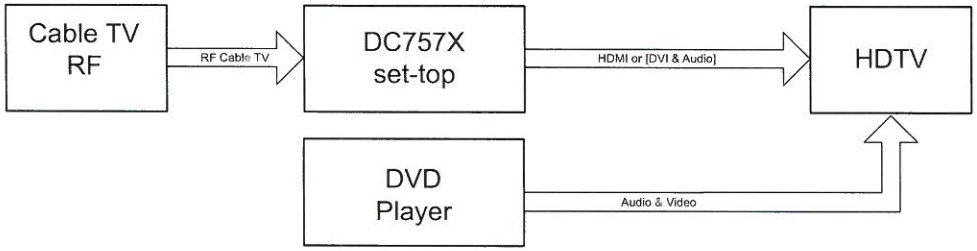


**About Setup E: Using component video cables to connect a DVD player and an HDMI TV**

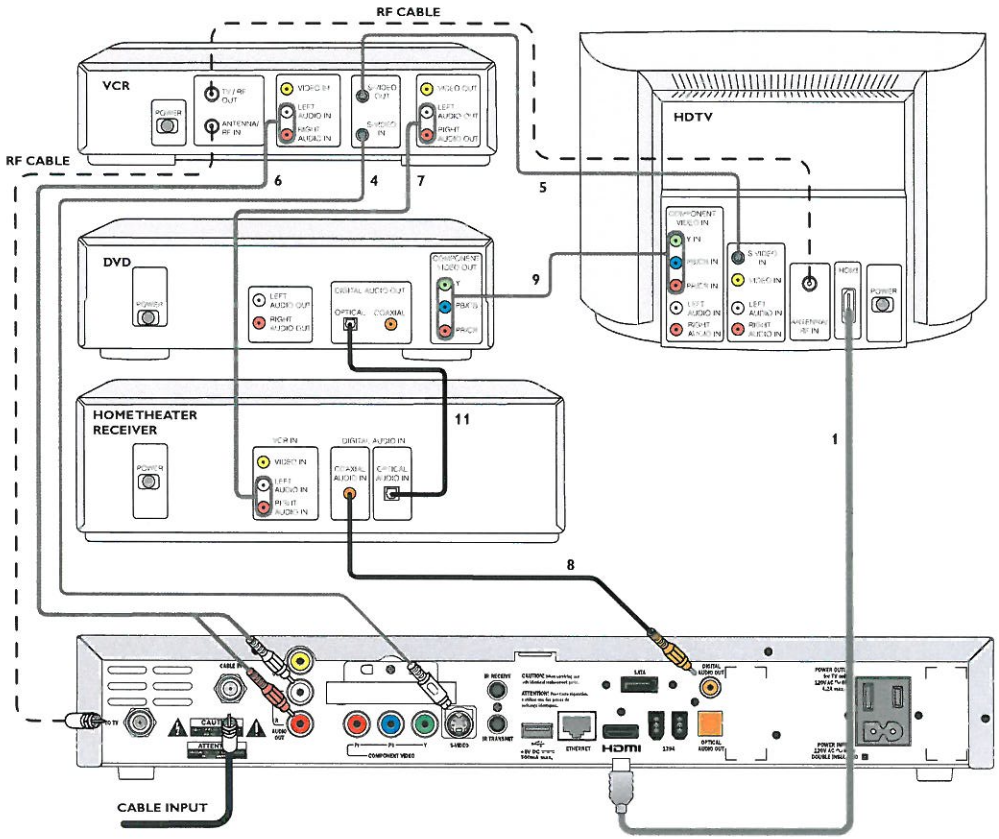
In this setup, a DVD player is added to the basic setup. In this example, the set-top and HDTV are connected by an HDMI cable. The component video option is shown in Setup H on page 30.

- This setup assumes that the DVD player has component video output jacks and you make the connection using three cables (9). If it does not have component video outputs, then you can connect it to the HDTV using any spare baseband video or S-video input jacks on the HDTV.
- The audio connection from the DVD player can go directly to the HDTV (provided that there are enough audio input jacks on the HDTV), as shown by cables 10 in the diagram on page 24.

**Cable Wiring Diagram E**



## SETUP F: VCR, DVD, HOME THEATER AND HDMI TV

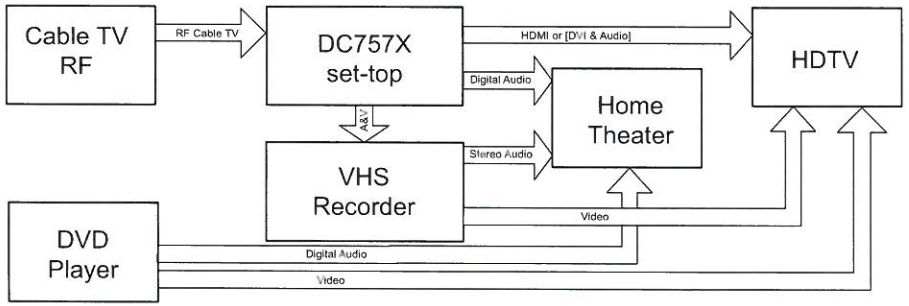


### About Setup F: Combining all the equipment with an HDMI TV

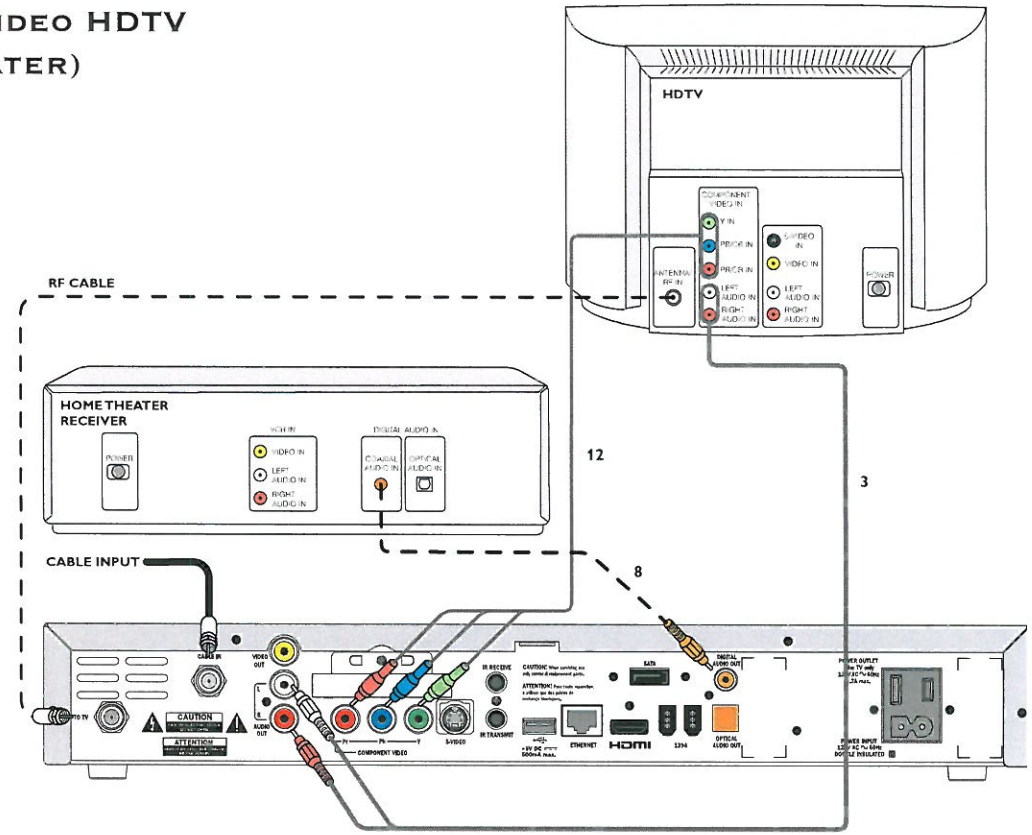
This setup shows the best use of cables and connectors if the HDTV has an HDMI and if the DVD player has component video connectors.

- Although the video and audio from the set-top to the VCR could be looped through the home theater receiver, it is not necessary to do this and it requires more cables.
- When you add a home theater receiver, as shown, the set-top's audio connection to the TV (via HDMI) is not needed, so you may wish to mute (turn off) the audio on the TV.

### Cable Wiring Diagram F



## SETUP G: COMPONENT-VIDEO HDTV
## (+ OPTIONAL HOME THEATER)

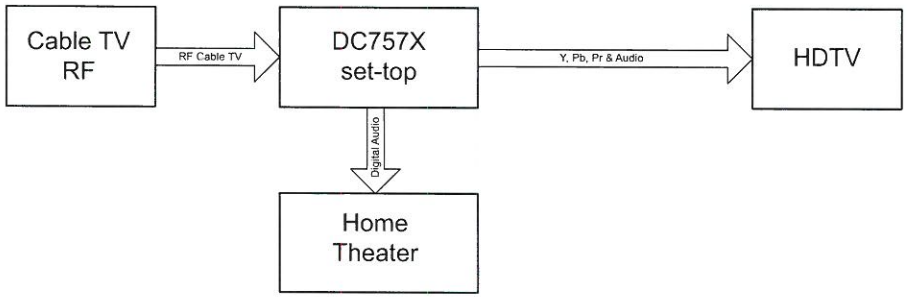


**About Setup G: Using component-video cables to connect an HDTV (optional home theater shown)**

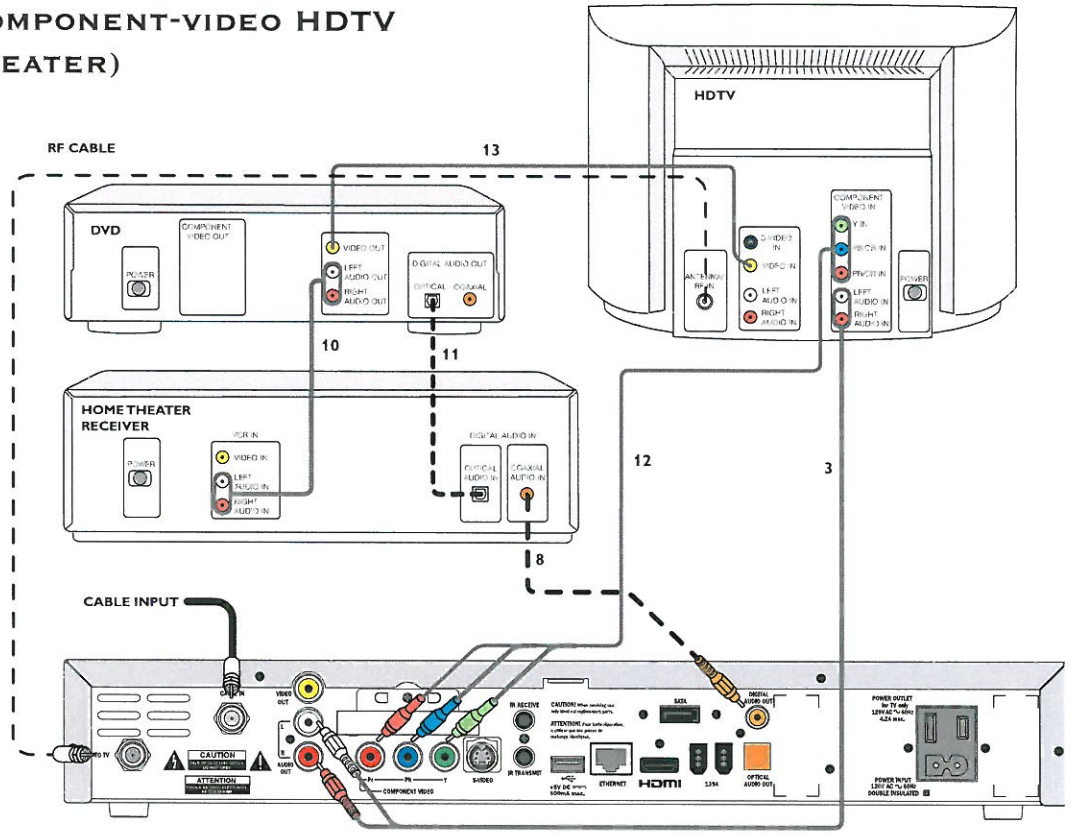
This is the most basic setup for a non-HDMI HDTV, with only an HDTV and optional home theater.

- The set-top has component-video connectors as well as an HDMI.
- Use component-video cables (12) to connect the HDTV to the set-top.
- In addition, connect baseband audio cables (3) between the AUDIO OUT jacks on the set-top and the baseband audio in jacks on the HDTV.
- To enhance the sound, you can connect a home theater receiver, in which case baseband audio cable 3 is not needed.
- There is a choice of two S/PDIF outputs: (i) electrical (labeled DIGITAL AUDIO OUT, which is shown connected, by cable 8 in the diagram, opposite) and (ii) optical (labeled OPTICAL AUDIO OUT).

**Cable Wiring Diagram G**



## SETUP H: DVD AND COMPONENT-VIDEO HDTV (+ OPTIONAL HOME THEATER)

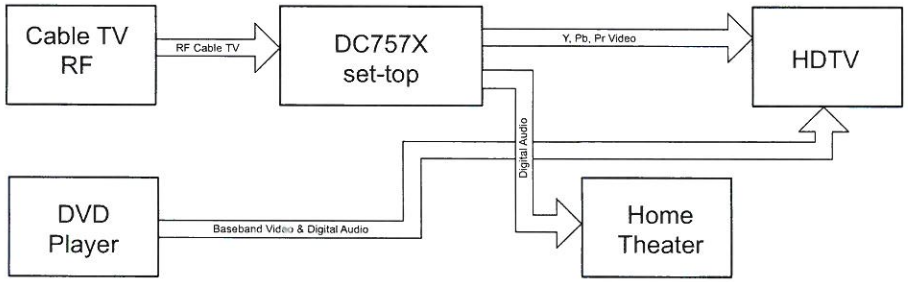


**About Setup H: Using component-video cables to connect a DVD player and an HDTV**

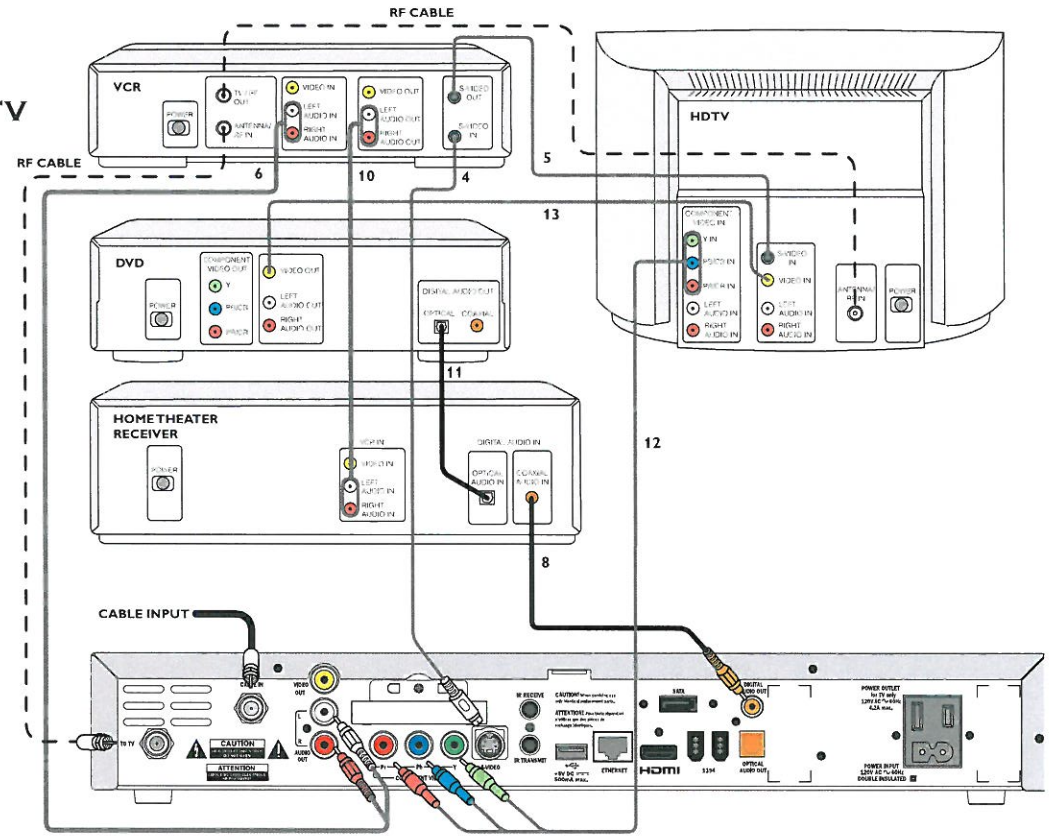
In this setup, a DVD player is added to Setup G.

- Connect the DVD player directly to the HDTV using any spare baseband video or S-video input jacks that the HDTV may have.
- The audio connection from the DVD player could go directly to the HDTV (provided that there are enough audio input jacks on the HDTV).
- To enhance the sound, you can connect a home theater receiver, in which case baseband audio cables 3 and 10 are not needed.
- There is a choice of two S/PDIF outputs on the set-top: (i) electrical (labeled DIGITAL AUDIO, which is shown connected, by cable 8 in the diagram, opposite, and (ii) optical (labeled OPTICAL AUDIO, ).
- Audio from the set-top reaches the home theater receiver via cable 8.

**Cable Wiring Diagram H**



## SETUP I: VCR, DVD, HOME THEATER AND COMPONENT-VIDEO HDTV

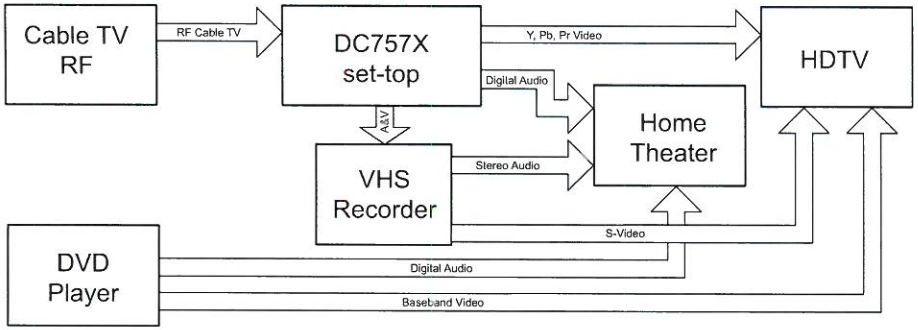


**About Setup I: Combining all the equipment for a component-video HDTV**

This setup shows the best use of cables and connectors if the HDTV and the DVD player have component video connectors.

- The audio output from the VCR goes to the home theater receiver (via cable 10) to enhance the sound during playback.
- Although the video and audio from the set-top to the VCR could be looped through the home theater receiver, it is not necessary to do this and it requires more cables.
- If there is no home theater receiver in the setup the audio from the set-top, VCR and DVD plater must all go to the HDTV.

**Cable Wiring Diagram I**



**WARNINGS**

Do not connect the set-top (or any other equipment such as a TV or VCR) to the AC power supply until you have properly connected all the other cables.

Do not defeat the safety purpose of the polarized plugs on power cords. A polarized plug has two blades with one wider than the other. This plug fits into the outlet in only one way; match the wide blade of the plug to the wide slot of the outlet.

### CONNECTING THE TV TO THE AC POWER SUPPLY

If the TV has a rating of less than 500 W, connect the power cord from the TV into the connector labeled "POWER OUTLET" on the rear panel of the set-top. This saves a wall outlet (although, if the TV is rated 500 W or more, you must connect it to a wall outlet).

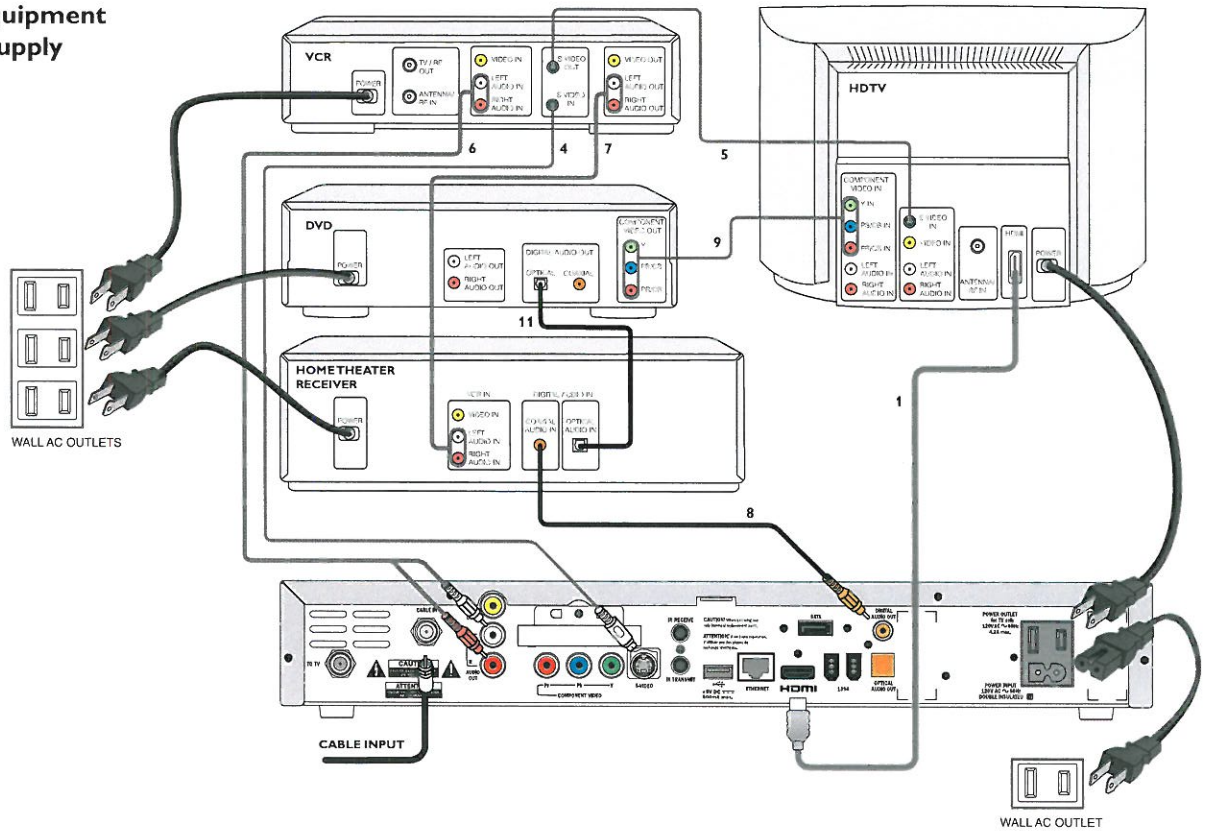
### CONNECTING THE POWER CORD TO THE SET-TOP

Before you connect the set-top to a wall outlet, connect the polarized socket on the power cord into the plug labeled "POWER INPUT" on the set-top's rear panel.

### CONNECTING EQUIPMENT TO THE WALL AC OUTLETS

Connect the polarized plugs on the power cords from the set-top, VCR and any other equipment into wall AC outlets. If these outlets have switches, switch them to ON.

## Connecting the equipment to the AC power supply



## TURNING THE SET-TOP ON AND OFF

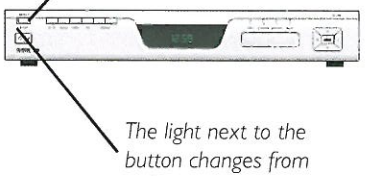
After you have connected the set-top to the wall AC outlet (and switched this outlet ON, if it has a switch), the light next to the **power** button on the set-top's front panel should be red.

Wait for a few seconds, then press the button labeled **power** on the front panel of the set-top to turn it on. The light next to the **power** button goes from red to green, to show that the set-top is on.

If the light next to the **power** button is neither red nor green, there is a problem.

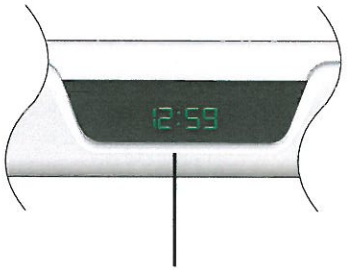
To turn the set-top on or off at any time, press the **power** button on its front panel or the **POWER** button on the remote control (first making sure the remote control is set to control the set-top).

Never turn off the set-top by simply disconnecting it from the power supply. If you need to disconnect the set-top, first stop any recording to an external hard disk (if there is one). Then turn off the set-top by pressing the **power** button on its front panel or on the remote control, so that the light by the **power** button goes red. Then wait 60 seconds before disconnecting the set-top at the wall AC outlet.



*To turn on the set-top, press the **power** button.*

*The light next to the button changes from red to green.*




*Front panel display, showing the time (see page 34)*

**NOTES**

It is important that, unless there is a lightning storm or the set-top's users are away from their home for a long time, they do not unplug the set-top at the wall AC outlet (or do not switch it off there, if the outlet has a switch). The set-top cannot be updated with new features, through the cable, if it is disconnected from the AC power supply.

Depending on the set-top's settings, if you switch the set-top off, any TV that is attached to the set-top's POWER OUTLET may also turn off. For more details, see page 55.

## TUNING THE TV AND VCR TO THE SET-TOP

The set-top's RF output port (labeled "TO TV") can transmit signals on either channel 3 or channel 4. The cable operator has set up the set-top to transmit on the channel that is suitable for the installation location and should have told you which channel this is. You must tune the TV and the VCR to this output channel so that programs can be watched and recorded through the RF coaxial cables. To do the tuning, refer to the diagram, right, and carry out the following steps.

1. Make sure that all the equipment, including the set-top, is turned on.
   Make sure that you have NOT selected a composite video input at the TV.
   Make sure that the Bypass feature is turned off (BYPASS is NOT lighted on the front panel).
2. On the VCR, switch the TV/VCR switch to "TV".
3. Tune the TV to the set-top's RF output channel (3 or 4, as stated by the cable operator).

You should now be able to see on the TV a program that is coming from the set-top. If you cannot see a program, check that the RF coaxial cables are securely and correctly connected (see the setup diagrams). If there is still a problem, check with the cable operator that you are using the correct RF output channel.

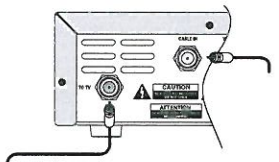
4. When you can see a set-top program on the TV, switch the TV/VCR switch on the VCR to "VCR".

If you can still see the picture on the TV, everything is tuned correctly. If the picture disappears, carry out the following final step.

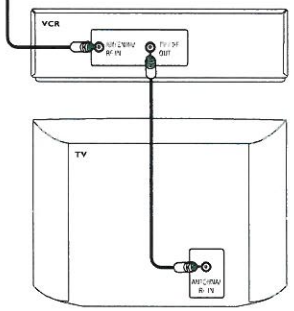
5. Tune the VCR by setting the VCR's RF output channel to the same RF channel number as the set-top and TV (either 3 or 4, as stated by the cable operator).

Everything should now be tuned correctly.

*Find out from the cable operator whether the set-top's RF output is channel 3 or channel 4 (see step 1)*



*Set the VCR's RF output to the same channel number as the set-top's RF output (see step 5)*




*Tune the TV to the same channel number as the set-top's RF output (see step 3)*

**NOTE**

Regardless of the program channel number selected on the set-top (and shown on its front-panel display), the RF output channel number will always be fixed (either 3 or 4, as quoted by the cable operator). The TV and VCR must be tuned to this channel if you want to watch and record programs through the RF coaxial cables.

## USING THE REMOTE CONTROL

The cable TV service-provider determines the digital channels, services and screen information that you see on the TV when you use the set-top and its remote control.

Consult the information supplied by the cable service-provider for details on how to make the most of the digital cable services. Also read the operating instructions that are supplied with the remote control.

## LIGHTNING STORMS

Disconnect the set-top's power cord during lightning storms. A lightning storm may affect the set-top, if it is on during the storm. It may appear that it has stopped working, but you can easily restore its operation as follows.

Unplug the set-top's power cord at the wall AC outlet. Then plug this power cord in again at the wall AC outlet (and, if there is a switch by this outlet, switch it to its ON position).

## ADDING DIGITAL VIDEO RECORDER (DVR) FUNCTIONALITY

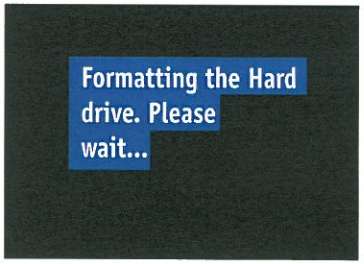
The cable service-provider may enable a feature that allows an external hard disk to work with the set-top. If this is the case, you can attach a hard disk to the SATA connector on the set-top's rear panel and use it to record and play back digital television programs (many more hours than if you record using a VCR or DVD recorder). There is a **record** light on the set-top's front panel to show when recording is taking place. Most major brands of serial ATA hard disk are supported. You should not connect an external hard disk to a 1394 port or a USB port.

The recordings on the external hard disk are uniquely linked to the set-top on which they were made, so you cannot play them back or delete them with a different set-top.

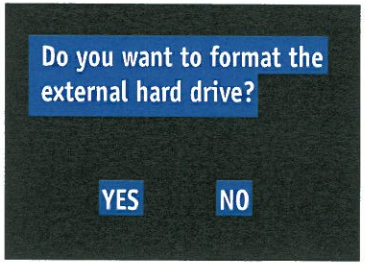
### Connecting an external hard disk

1. Turn off the set-top with the **power** button and then wait 60 seconds before disconnecting it from the wall AC socket. (You must not "hot plug" an external hard disk).
2. Connect the external hard disk, using an appropriate cable, to the SATA connector on the set-top.
3. Apply power to the external hard disk.
4. Reconnect the set-top to the wall AC socket and turn it on with the **power** button.

If the external disk needs formatting, the set-top will do this automatically and inform you by means of a pop-up dialog box on the TV screen (see right).




*Message for a new external hard disk*




*Message if the external hard disk has previously been formatted on a PC. Use the **arrow** and **select** buttons to choose.*

### Using the external hard disk for DVR functions

The set-top can tune to only one digital channel at a time, so you cannot record one program while watching a different one (but see also page 41). However, many DVR functions are available if the cable service-provider enables the SATA connection.

With the set-top and attached external hard disk you could:

- Pause live TV
- Instantly replay live TV
- Fast forward up to the point of live TV
- Watch a scene in slow motion
- Rewind through a program you have been watching
- Record high definition digital pictures (as well as the regular standard definition)
- Record a program while watching a previously recorded program
- Schedule the set-top to record a program or a whole series
- Fully manage the stored recordings
- Back up the digital recordings to a VCR or DVD recorder
- Retain full control over any parental viewing restrictions you have set up

Consult the information supplied by the cable service-provider for more details. Also read the operating instructions that are supplied with the remote control.

**NOTE**

The exact functionality of the DVR (digital video recorder) in the set-top depends on the on-screen program guide. For more details, consult the information supplied by the cable service-provider.

Do not confuse recording to the hard disk with recording to a separate VCR or DVD recorder, as mentioned on page 41.

## USING RF BYPASS

You can use RF Bypass to watch the regular (analog) channels that are included in the cable service. It makes these channels "bypass" the set-top and pass directly to the TV and/or VCR.

**To use RF Bypass:**

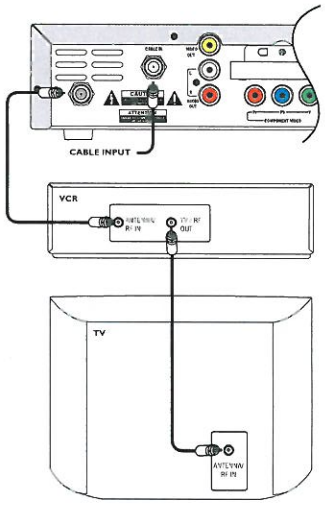
- The equipment must be connected by RF leads (see the diagram, right). Other connections are possible in addition to those shown (see page 14) provided that the RF connection is included.
- The TV and VCR need to have been tuned to the set-top's VHF output channel (3 or 4, depending on the location - see page 37).
- The RF Bypass feature must be on (you may need to set it to "On" in a Setup menu; see page 55).

To use RF Bypass, press the **BYPASS** button on the set-top's front panel. When you have finished using RF Bypass, press the **BYPASS** button again. The remote control may have a button that allows you to turn Bypass on and off.

For you to start using RF Bypass, the set-top must be turned on. However, if the RF Bypass feature has been set to "On", RF Bypass will work even if you turn the set-top off.

*When RF Bypass is on:* you can use the TV's remote control to tune to any of the available regular (analog) channels and watch that channel on the TV (the path is the RF cable). You can, at the same time, use the set-top's composite video and L & R audio outputs to record on the VCR the digital channel that the set-top is tuned to. (This channel number is shown on the set-top's front panel.*) This means that, when the bypass is on, you can watch a regular (analog) channel on the TV and, at the same time, record a ***digital*** channel on the VCR.

*When RF Bypass is off:* you see on the TV the channel that the set-top is tuned to. This is the same channel that the VCR receives. So, when RF Bypass is off, you can record on the VCR only the program that you are watching on the TV.




**NOTE**

* If the "Front LED Display" (see page 55) is set to "Current Time", you will not see the channel number. To see the number of the channel the set-top is tuned to, you should set "Front LED Display" to "Current Channel".

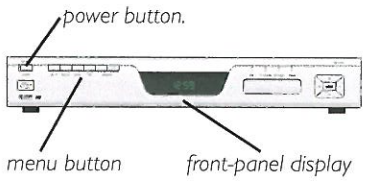
## About User Settings

You need to make the appropriate settings to make sure the set-top is compatible with the HDTV or TV. You can make the following settings.

- TV Aspect Ratio (the screen's width-to-height ratio, or shape)
- TV Display Capability (screen resolution)
- Auto Pillarbox
- Closed Captions
- Front Panel Settings

You can also reset the user settings to the factory defaults.

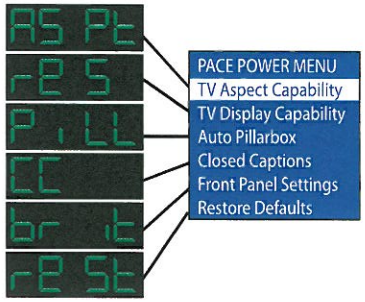
You use the ◀, ▶, ▲, ▼ and **select** buttons *on the front panel* to make the settings. You check the settings by looking at the set-top's front panel. You can also look at on-screen menus, although please note that, until the set-top has been set up to match the display capability of the TV, these menus may not be visible.



### Putting the set-top into "user settings mode"

1. Make sure that the set-top is turned on (power light is green).
2. Press the **power** button on the set-top, then, *within 1 second,* press the **menu** button.

The front panel displays "ASPt" (or another of the 6 "words" shown right). You may also see the PACE POWER menu, shown right, on the TV screen.




3. When you have finished making changes (see pages 43 to 51), press the **power** button to remove the PACE POWER menu and return to normal viewing.

## About the TV Aspect Ratio

The TV that you have connected to the set-top has an aspect ratio (width-to-height ratio) of 4:3 (basic/standard) or 16:9 (widescreen). You must set the appropriate TV Aspect Ratio (4:3 or 16:9) on the set-top, so that it is compatible with the TV.

*4:3 standard TV, EDTV or HDTV*

*16:9 HDTV*

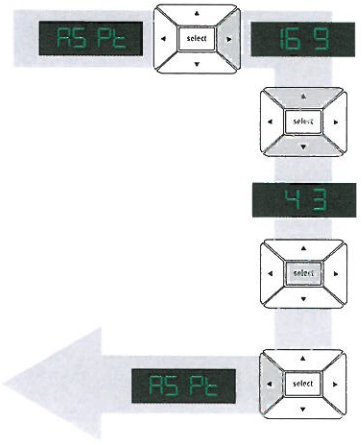
### Setting the TV Aspect Ratio

If you have not done so, put the set-top into "user settings mode", as described on page 42. Press the ▲ or ▼ button until the front panel shows "ASPt".

The flow diagram on the far right shows how you use the **arrow** and **select** buttons on the set-top's front panel to change the display and make the settings. See also the instructions below.

1. To change the **TV Aspect Ratio**, press the ▶ button. The current TV Aspect Ratio setting ("4:3" or "16:9") appears on the front panel. You may also see the menu, shown right, on the TV screen.

2. Press the ▲ or ▼ button until the TV Aspect Ratio you want appears on the front panel.
3. Press the **select** button to confirm the choice and change to that TV Aspect Ratio.
4. Press the ◀ button. The front panel will display "ASPt" again.
5. To continue making the settings, see the next section.



## About TV Display Capability (resolution settings)

- *The set-top* can transmit pictures to the TV in a range of resolutions (also called "Display Capabilities" - see below for the settings available). Generally, higher screen resolutions give better quality pictures. However, the quality will always depend on how the program was originally transmitted.
- *Different TVs* display different screen resolutions. For example, standard TVs display "480i", EDTVs (Enhanced Definition TVs) display "480p" and most HDTVs display "1080i" or "720p". Many HDTVs will display at more than one resolution. For more information, see the information supplied with the HDTV.

You must make the appropriate TV Display Capability setting(s) on the set-top, so that it is compatible with the TV. See the next page for full instructions.

In order to display the best picture every time, you should select ***every*** resolution that the TV is capable of displaying. This should ensure that programs are displayed with the minimum distortion.

### TV Display Capability settings

- **480i** is standard definition NTSC and is transmitted in a 4:3 aspect ratio (see right)
- **480p** is enhanced digital TV and can be transmitted in either a 4:3 or 16:9 aspect ratio
- **720p** and **1080i** are HDTV and are transmitted in a 16:9 aspect ratio (see right)

*480i transmission: The aspect ratio is 4:3*

*1080i transmission: The aspect ratio is 16:9*

**NOTE**

When the HDTV is connected to the set-top via an HDMI, the set-top gets information from the HDTV about the HDTV's display capability. The set-top uses this information to adjust its TV Display Capability settings.

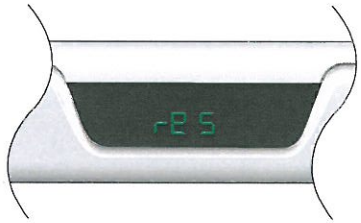
The set-top also records the HDTV's ID (identification), so that only one HDTV is supported at any one time. When the HDTV has updated the set-top's TV Display Capability settings, you may change them if you wish. Your changes will then be stored with the ID.

You can restore the set-top's TV Display Capability settings to their factory values, as described on page 52. You can also restore the set-top to the settings that the HDTV has passed to the set-top. To do this you must first restore the factory settings while the set-top is disconnected from the HDTV, then reconnect the HDTV via an HDMI cable.

### Changing the TV Display Capability

If you have not done so already, put the set-top into "user settings mode", as described on page 42. Press the ▲ or ▼ button until the front panel shows "reS" (short for "resolution").

The flow diagram on page 46 shows how you use the **arrow** and **select** buttons on the set-top's front panel to change the display and make the settings. See also the instructions below. The available resolutions are: 1080i, 720p, 480p and 480i. (See pages 44 and 46 for more information about these.)



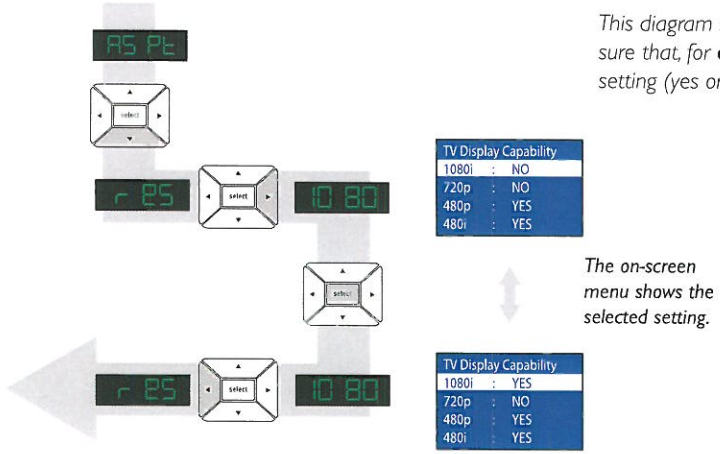

1. To change the **TV Display Capability**, press the ▶ button when you see "reS" on the front panel, as shown right.
   The front panel shows the TV display capability that was last selected, so it could show 480i, 480P, 720P or 1080i (this final setting is displayed as 1080). You will probably also see the TV Display Capability menu, shown right, on the TV screen. If you cannot see this menu, you should be able to do so by the time you have finished making these Display Capability settings.

| TV Display Capability | | |
|---|---|---|
| 1080i | : | YES |
| 720p | : | NO |
| 480p | : | YES |
| 480i | : | YES |

2. If you can see the menu, proceed as follows:
   Press the ▲ or ▼ button to highlight each resolution in turn and, for each one, press the **select** button if you want to change the setting (the setting changes between "YES" and "NO" each time you press **select**). ***If, at any stage in this process, the menu disappears from the screen, immediately press select to restore the menu.***

3 If you press the ▶ button when you see "reS" on the front panel, but the menu does not appear on the TV screen, proceed as follows:
   Press ▲ or ▼ until "1080" is displayed on the front panel, then press **select**.
   If the menu then appears, check and change the settings as described in Step 2 above.
   If the menu does not appear at this stage, press **select** again, then press ▲ or ▼ until "720P" is displayed on the front panel, and then press **select**. If the menu then appears, check and change the settings as described in Step 2 above. Repeat this process until you have tried all the resolutions.

4. When you are satisfied that all the TV resolutions are correct, press the ◀ button. The front panel displays "reS" again. To continue making the settings, see page 47.




*This diagram shows an example only. Please make sure that, for* ***each*** *resolution, you select the correct setting (yes or no) that applies to the TV.*

*The on-screen menu shows the selected setting.*

**Further information about the TV Display Capability**

The TV Display Capability settings relate to equipment that is connected to the HDMI and COMPONENT VIDEO OUT connectors because the settings control the output at those connectors. If equipment is connected via a HDMI cable, that equipment may also pass information back to the set-top, which may affect what settings are available.

Generally, the TV Display Capability settings do not affect equipment connected to the VIDEO OUT and S-VIDEO jacks, because the output at these jacks will always be the standard definition 480i.

## AUTO PILLARBOX

If the TV is a 16:9 TV that does not automatically detect 4:3 transmissions (and therefore does not add black bars to the sides of the picture), then 4:3 transmissions may display "stretched" to fit the 16:9 screen. If you do not want this effect, you can set the set-top to add black bars to the 4:3 picture, so that it is transmitted to the TV at a 16:9 aspect ratio. See the example below.

*4:3 transmission*

*16:9 TV with no automatic detection of 4:3, Auto-pillarbox switched **off***

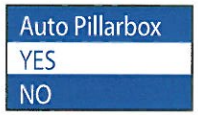
*16:9 TV with no automatic detection of 4:3, Auto-pillarbox switched **on***

### Changing the Auto Pillarbox setting

If you have not done so already, put the set-top into "user settings mode", as described on page 42.

1. Press the ▲ or ▼ button until the front panel shows "PiLL", as shown right.

2. Press the ▶ button.
   The current Auto Pillarbox setting ("YeS" = switched on, or "no" = switched off) is displayed on the front panel. If you can see the on-screen menus, the menu shown right appears.



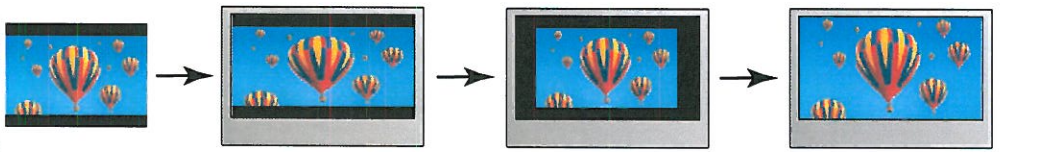
3. If you want to change the setting, press ▲ or ▼. Press the **select** button to confirm the choice and change to the new setting.
4. Press the ◀ button. The front panel displays "PiLL" again.

To continue making the settings, see the next section.

## NOTE

**16:9 picture in a 4:3 transmission**

Sometimes 4:3 transmissions may contain a 16:9 picture, with black borders at the top and bottom. On a 16:9 TV this may display with black borders all the way around the picture. To remove these borders, you can use the "Zoom function" button on the remote control (could be labeled Zoom or Aspect).
See the example below. For more information about using "Zoom," see page 54.



*4:3 transmission*

*16:9 TV with no automatic detection of 4:3, Auto-pillarbox switched **off***

*16:9 TV with no automatic detection of 4:3, Auto-pillarbox switched **on***

*Use 'Zoom' to increase the picture size. (Note: the picture may lose some definition due to the expansion)*

## CLOSED CAPTIONS SETTINGS

Closed captioning is a means of displaying alerts and subtitles on the TV screen, superimposed on whatever you are watching. You can turn closed captions on or off, as required, and you can also change the closed captions' appearance.

### Turning closed captions on or off

If you have not done so already, put the set-top into "user settings mode", as described on page 42.

1. To change the Closed Captions setting, press the ▼ button until the front panel displays "CC", as shown right.
2. Press the ▶ button. The current Closed Captions setting, either "On" (switched on) or "OFF" (switched off) is displayed. If you can see the menus, the Closed Captions menu appears, see right.
3. If you want to change the setting, press the **select** button - the setting changes.
4. Press the ◀ button. The front panel displays "CC" again.

To continue making the settings, see the next section.

### Changing the closed captions' appearance

If you want to change the closed caption's appearance, we recommend you use the on-screen menus, rather than the front-panel display.

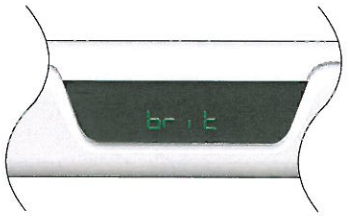
1. If you have not done so already, put the set-top into "user settings mode", as described on page 42. The PACE POWER menu, shown right, appears on the TV screen.
2. To change the Closed Captions appearance, press the ▼ button to highlight "Closed Captions", then press ▶. The Closed Captions menu, shown right, appears.
3. Press the ▼ button to highlight "Configure Captions", then press **select**. The Configure Captions menu, shown right, appears.
4. Use the ▲ and ▼ arrows to highlight each option in turn. Use the **select** button to choose the setting you want (the setting changes each time you press **select**). Note: You must set "Caption Style" to "Viewer", in order for the changes to take effect.
5. When you have made all the changes you want to make, press ◀ twice to re-display the PACE POWER menu.

## FRONT PANEL SETTINGS AND ENERGY SAVE

Occasionally, the brightness of the set-top's front panel display may change, for example the display may dim automatically when the set-top is turned off. You can use the Front Panel Settings to set the brightness levels of the display at its brightest and dimmest.

You can also use the Front Panel Settings to activate Energy Save. If the set-top's Energy Save mode is On, an external hard disk (if present) will receive no power when you switch off the set-top (that is, when the front-panel power light is red).

1. If you have not done so already, put the set-top into "user settings mode", as described on page 42. Then press the ▲ or ▼ button until the front panel displays "brit", as shown right.
2. Press the ▶ button. The Front Panel Setting menu, shown right, appears.




### Changing the Front Panel Display Settings

1. Press the ▲ or ▼ button to highlight "Dim Level" or "Bright Level" as required ("Dim Level" is the brightness of the display at its dimmest; "Bright Level" is the brightness of the display at its brightest.)
2. Use the **select** button to choose the setting you want (the setting changes each time you press **select**): "Low", "Std" (Standard) or "High".

### Changing the Energy Save Setting

1. Press the ▲ or ▼ button to highlight "Energy Save".
2. Use the **select** button to choose the setting you want (the setting changes each time you press **select**): "On" or "Off".

When you have made all the changes you want to make at the Front Panel Setting menu, press the ◀ button to re-display the PACE POWER menu.

**NOTE**

The exact functionality of the Energy Save feature depends on the on-screen guide. For more details, consult the information supplied by the cable service-provider.

## Removing the User Settings menus

When you have finished making changes, press the **power** button to remove the User Settings menu and return to normal viewing.

## Restoring the factory default settings

If you wish, you can restore the user settings to their factory defaults. All the changes you have made will be lost and the settings will revert to those that were programmed in the factory. The factory settings are:

| User Settings menu item | Options | Factory default setting |
|---|---|---|
| TV Aspect Ratio | – | 16:9 |
| TV Display Capability | 1080i<br>720p<br>480p<br>480i | Yes<br>No<br>Yes<br>Yes |
| Auto Pillarbox | – | No |
| Closed Captions | – | Off |
| Front Panel Setting | Dim Level<br>Bright Level<br>Energy Save | Std<br>High<br>On |

To restore the factory default settings, follow the instructions on page 53.

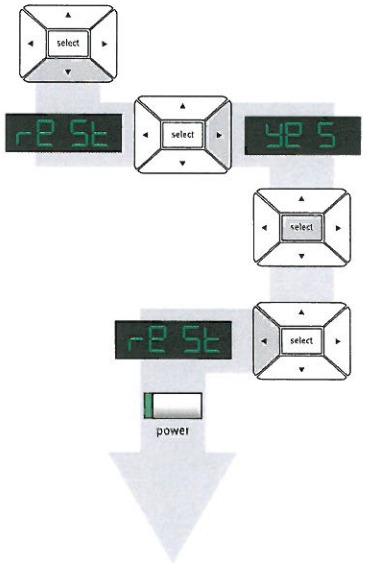
If you have not done so, put the set-top into "user settings mode", as described on page 42.

The flow diagram on the right shows how you use the **arrow**, **select** and **power** buttons on the set-top's front panel to change the display and make the settings. See also the instructions below.

1. Press the ▼ button until the front panel displays "reSt" (short for "**rest**ore factory settings"), as shown right.
2. Press the ▶ button. "YeS" appears on the set-top's front panel. (If you no longer wish to restore the factory settings, press the ◀ button.)

You may also see this message on the TV screen: "Restore Default. Press OK to confirm"

3. To confirm and restore the factory settings, press the **select** button.
4. The factory settings are restored. If you want to continue changing the settings, press ◀ then see the sections from page 42 onwards. If you have finished changing the settings, press the **power** button. The set-top will switch on with the restored settings.




## NOTES

If the set-top and HDTV are connected via a HDMI cable, the HDTV may pass information about the required settings back to the set-top (see page 44). If you wish to restore the set-top's settings to those created by the HDTV, you should disconnect the set-top from the HDTV before you restore the factory default settings. When you reconnect the HDTV to the set-top via the HDMI cable, the HDTV will pass back the information again.

**Always turn off the set-top, wait 60 seconds, then disconnect the set-top from the wall AC outlet before you connect or disconnect any other equipment to or from its rear panel.**

## USING "ZOOM" TO CHANGE THE PICTURE

Making the appropriate TV Aspect Ratio and TV Display Capability settings (see pages 42 through 48) should ensure that the picture on the TV screen is not distorted (stretched or squashed) and that it fills as much of the screen as possible.

However, even if you have selected the correct settings, there will be times when a program appears with black borders either at the top and bottom or at the sides of the picture (or sometimes even all the way round the picture). This happens because the aspect ratio (shape) of the ***transmitted program*** does not match the aspect ratio of the HDTV, or because the transmitted programme includes black borders as part of the transmission (see right).

The remote control should have a "zoom function" button (could be labeled Zoom or Aspect), which you can use to change the TV picture until it appears as you want it to:

1. Press the "zoom function" button once to change the display.
2. Press it again to change the display again. Continue to press it in this way until the picture appears as you want it to.

Note: The effect that this button has on transmissions depends on the transmission itself. On some transmissions it may have no effect at all.

*A 4:3* ***transmission****, with a 16:9 picture. Dark bars are added at the top and bottom of the transmission*

*A 16:9* ***transmission,*** *with a 4:3 picture in it. Dark bars are added at the sides of the transmission*

In addition to the user settings described on pages 42 through 53, setup menus may be available in the on-screen guide. These should be described in the information provided by the service-provider. There may also be on-screen information to explain these menus.

However, certain settings may affect how the set-top and TV work. See the table below for information about typical menu items and settings (they depend on which on-screen guide is running on the set-top, so may vary from those given below).

| Item | Setting | Options | Notes |
|---|---|---|---|
| Cable Box Setup | Front LED Display | Current Time, Current Channel | If setting is "Current Time", the time is displayed on the front panel when the set-top is switched on. If setting is "Current Channel", the **program** *channel number* is displayed. |
| | AC Outlet | Switched, Unswitched | If setting is "Switched", the AC outlet on the set-top's rear panel is *on* when the set-top is *on*, and *off* when the set-top is *off*, so any TV that is therefore receiving its power from this AC outlet will switch off when the set-top is turned off. If setting is "Unswitched", the AC outlet is *always on*, so any TV that is receiving its power from this AC outlet will continue to receive power whether the set-top is switched on or off. |
| | RF Bypass | Off, On | This must be "On" before you can use RF Bypass. For information about RF Bypass, see page 41. |
| | Configuration | | Allows you to view the configuration of the set-top. |
| Audio | Default Audio Track | Channel Default, English, various other languages | Sets the language track that the set-top first attempts to use when tuning to a channel. "Channel Default" means the set-top will use the default audio track for the program. Selecting a language means it will use the corresponding language track, if available. |
| | Optimal Stereo | | Selecting this option enables the set-top to regulate the volume to minimize sudden changes in volume, for example during a commercial break. |
| | Audio Output | TV Speakers, Stereo, Advanced | If you select "Advanced", further settings are displayed, allowing you to set the Compression (to None, Light or Heavy) and the Stereo Output (to Mono, Stereo or Matrix Stereo). |
| Screen position | | | This allows you to adjust how the picture displays on the TV screen. |

*Other items and options may be available on these screens. The menus may be subject to change in the future, as the set-top advances with new technology.*

## Displaying the Diagnostic Information screens

The Diagnostic Information screens provide "read-only" information about the configuration of the set-top. This includes information on, for example, addressing, memory, current channel, status information, etc.

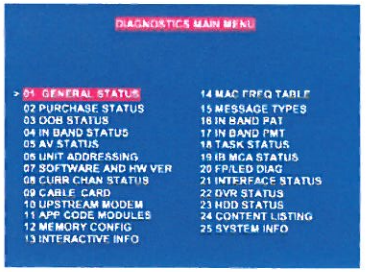
First of all, make sure that the set-top is connected to the TV by the S-video, composite video (RCA) or RF (TO TV) connection, and set the TV to its appropriate input.

Ensure the set-top is turned on (the light next to the **power** button on the front panel should be green)

**To display the Diagnostic Information screens:**

1. Press and hold the **power** button on the remote control, then immediately (within 2 seconds) press the **select** button.
2. Release both buttons.

   The Diagnostics Main Menu (see right) appears on the TV screen.
3. Use the ▲ and ▼ buttons to move the on-screen cursor through the list of Diagnostic screens, then use the **select** button to view the chosen sub-menu or information screen.
   To exit a sub-menu and return to the preceding level, press ◀.
4. To remove the Diagnostic Information screen, and return to normal TV viewing, press the **power** button on the remote control twice.




*Diagnostics main menu*

## SOLVING PROBLEMS

If the installed system does not seem to be working properly, first make sure that all the cables are securely connected, then carry out the following checks, in the order shown.

| Check | Suggested solution | Further checks, if there is still a problem |
|---|---|---|
| Is anything lighted on the set-top's front panel? **NO** ▶<br>**YES** ▼ | Power may not be reaching the set-top. Make sure that the power cord is properly plugged in. If there is a switch by the wall AC power outlet, switch it to ON. | Check that the wall AC power outlet is working (for example by plugging in a lamp). |
| Does the remote control operate the set-top? **NO** ▶<br>**YES** ▼<br><br>Please see the next page | The set-top may not be turned on.<br>Check if the light next to the **power** button on the front panel is green. If it is red, press the power button on the front panel to turn on the set-top. | Check that nothing is blocking the path from the remote control to the front panel.<br>Check that the remote control is currently set to operate the set-top (consult the instructions supplied with the remote control).<br>If the remote control will still not operate the set-top, replace the batteries in the remote control.<br>If there is still a problem, try to operate the set-top by using its front-panel buttons. If this works, then the remote control may be faulty. |

| Check | Suggested solution | Further checks, if there is still a problem |
|---|---|---|
| Can you see a picture on the TV screen?<br>NO ▶<br>YES<br>▼ | The TV and other equipment may not be turned on. Check that they are plugged into AC power outlets and turned on.<br><br>**Note:** If you have connected the TV to the POWER OUTLET (AC outlet) on the set-top, when you turn off the set-top, the TV may turn off automatically, if the "AC Outlet" is set to "Switched" (see page 55). You may wish to keep this feature, or you may wish to set "AC Outlet" to "Unswitched". | Make sure the Bypass feature is turned OFF (the word **BYPASS** on the front panel is not lighted).<br><br>Check that you have selected the appropriate AV input on the TV: HDMI, component video (YPbPr), composite video or S-video (depending on how the system is connected up).<br><br>If you are using a component video (YPbPr) connection, make sure the set-top's TV Display Capability settings are appropriate for the TV (see page 44).<br><br>If the video path between the set-top and the TV loops through other equipment (such as a VCR), you may need to turn off this equipment for the loopthrough to work.<br><br>If you are using the HDMI connection, make sure the connection goes directly from the set-top to the TV. If the set-top detects that the link is not secure, the set-top will not transmit a picture (see page 15). If you expect the link to be secure, try disconnecting and reconnecting the HDMI cable. |
| Is the picture distorted or too small?<br>YES ▶<br>NO<br>▼<br>Please see the next page | Check that the TV Aspect Ratio and TV Display Capability, as set on the set-top, are appropriate for the TV (see pages 42 through 53). Change them if necessary. | If the TV is a 16:9 TV, you can use Auto Pillarbox to add black borders to 4:3 transmissions, so that the picture is not stretched (see page 47).<br><br>If the TV Aspect Ratio and TV Display Capability settings are correct, try using Zoom to improve the picture (see page 54) or consult the instructions that came with the TV and try adjusting the TV's display. |

| Check | Suggested solution | Further checks, if there is still a problem |
|---|---|---|
| Can you display menus and guides on the screen? **NO** ▶<br>**YES** ▼ | If the TV is connected to the VIDEO OUT or S-VIDEO jacks, then you will see menus and guides only if the screen resolution **480i** is set to "**Yes**" and **480p**, **720p** and **1080i** are set to "**No**". | Use the front panel to check the user settings (see page 42) and change the TV Display Capability resolution settings if necessary (see page 44). |
| Is there any sound? **NO** ▶<br>**YES** ▼ | Check that the audio cables are securely and correctly connected. | Check that you have not muted the sound on the set-top and/or TV. Adjust the volume control on the set-top and/or TV. If you are using a home theater receiver, check it is set up correctly. |
| Can you hear stereo sound? **NO** ▶<br>**YES** ▼<br>Please see the next page | First check that the program is likely to have stereo sound (an old movie, for example, may not be in stereo).<br>Check the on-screen Setup Menu, Audio settings (see page 55). The Stereo Output may be set to "Mono". Change it to "Stereo". | If the TV is mono, you will hear stereo sound only if you have a stereo audio amplifier and speakers or home theater connected to the stereo VCR or set-top. |

| Check | Suggested solution | Further checks, if there is still a problem |
|---|---|---|
| Can you see and hear a DVD that you are trying to play? **NO** ▶<br>**YES** ▼<br>Please see the next page | Check that all the audio and video cables are securely and correctly connected, including any to a home theater receiver that you may be using to enhance the sound. | |
| Is the picture low quality, or "fuzzy", when you are expecting to see an HDTV-quality picture? **YES** ▶<br>**NO** ▼ | Some programmes may include "copy protection" which means, if the set-top is connected to the HDTV via the component video jacks, the picture is downgraded to standard TV quality. To prevent this from happening, use an HDMI (high definition multimedia interface) connection instead. | |
| Can you see only regular (analog) channels but not any digital channels? **YES** ▶ | The Bypass feature may be turned on. Check in the Setup menu whether RF Bypass is On or Off. If Bypass is on, use the menu, or press the **BYPASS** button on the set-top's front panel, to turn the feature OFF. | |

## APPARENT "PROBLEMS" THAT MAY BE CAUSED BY CERTAIN MENU SETTINGS

| Problem | Reason |
|---|---|
| No audio | There is a menu to select a second soundtrack (SAP: secondary audio program). If this is selected, but no SAP is being transmitted, there may be no audio. |
| The HDTV turns off when you play the DVD player or other attached equipment. | If the HDTV is attached to the AC outlet on the set-top's rear panel, it will be affected by a menu item called "AC Outlet". If this is set to "Switched", then, when you turn off the set-top to play back from the DVD player, the attached HDTV will also turn off. |
| The HDTV turns on when you record on the VCR. | If the HDTV is attached to the AC outlet on the set-top's rear panel, it will be affected by a menu item called "AC Outlet". If this is set to "Switched", then, when you turn on the set-top to record on the VCR, the attached HDTV will also turn on. |
| RF Bypass occurs when you turn off the set-top. | There may be a menu where you can set the RF Bypass feature to turn on automatically when you turn off the set-top (although this menu may not be available). This feature should not cause a problem as it is still possible (by pressing BYPASS) to turn on the RF Bypass when the set-top is on. These are the circumstances in which you could record one channel from the set-top while you watch, on the TV, a different (analog) channel direct from the cable. |